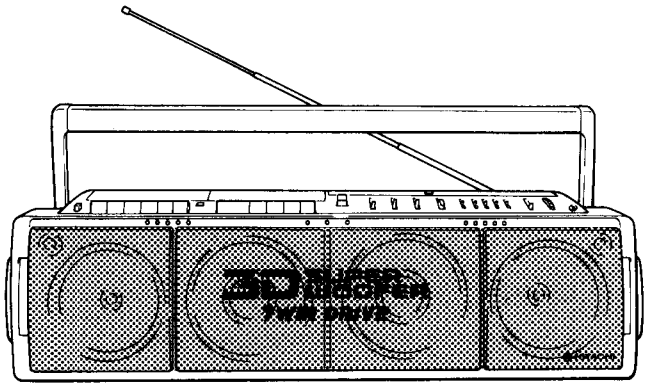
HITACHI
SERVICE MANUAL

TY | No. 594 EF

TRK-3D80
[H, HC, E, E(BS), W, W(UN), AU]

for E, E(BS)
TN-21SW-1416 chassis
except E, E(BS)
TN-521ZHW-160 chassis



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SAFETY PRECAUTIONS

The following precautions should be observed when servicing.

1. Since many parts in the unit have special safety-related characteristics, always use genuine Hitachi's replacement parts. Especially critical parts in the power circuit block should not be replaced with other makers. Critical parts are marked with ⚠ in the circuit diagram and printed wiring board.
2. Before returning a repaired unit to the customer, the service technician must thoroughly test the unit to ascertain that it is completely safe to operate without danger of electrical shock.

SPECIFICATIONS

●RADIO SECTION

Circuit System: FM/SW/MW/LW-4bands superheterodyne [for E, E(BS)]
FM/SW2/SW1/MW(AM)-4bands superheterodyne [except E, E(BS)]

Tuning Range:
FM: 88 to 108 MHz [except E, E(BS)]
FM: 87.5 to 108 MHz [for E, E(BS)]
SW: 6 to 18 MHz [for E, E(BS)]
SW2: 7 to 22 MHz [except E, E(BS)]
SW1: 2.3 to 7 MHz [except E, E(BS)]
MW(AM): 530 to 1,605 kHz
LW: 150 to 285 kHz [for E, E(BS)]

Intermediate Frequency:
FM: 10.7 MHz
SW/MW/LW: 465 kHz [for E, E(BS)]
SW2/SW1/MW(AM): 455 kHz [except E, E(BS)]

Sensitivity:
FM: 13 dB (pra.)
5 dB (max.)
SW: 30 dB (pra.) [for E, E(BS)]
15 dB (max.) [for E, E(BS)]

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT.

HIGH PERFORMANCE PORTABLE CREATIVE SOUND SYSTEM

July 1988 YOKOHAMA WORKS

SW2: 30 dB (pra.) [except E, E(BS)]
20 dB (max.) [except E, E(BS)]
SW1: 48 dB (pra.) [except E, E(BS)]
35 dB (max.) [except E, E(BS)]
MW(AM): 50 dB (pra.)
35 dB (max.)
LW: 55 dB (pra.) [for E, E(BS)]
40 dB (max.) [for E, E(BS)]

Antennas (Aerials): FM/SW/SW2: Rod antenna
SW1/MW(AM)/LW: Built in ferrite antenna

● TAPE RECORDER SECTION

Tape: Cassette tape
Track System: 4tracks 2channels stereo
Tape Speed: 4.75 cm/sec.
Recording System: AC bias (TAPE2)
Erasing System: Magnet erase (TAPE2)
Erasing Ratio: 60 dB
Frequency Response: Normal: 50 to 12,000 Hz
CrO_2: 50 to 13,000 Hz
Signal to Noise Ratio: 45 dB
Wow and Flutter: 0.25% (W·RMS)
Cross Talk: Between tracks: 60 dB [for E, E(BS)]
55 dB [except E, E(BS)]
Between channels: 30 dB
Input sensitivity and impedance: CD/Line-in: 650 mV, 25 kΩ
Output road impedance: Headphones: 8 to 300 Ω
Distortion: 3%
Motor: DC micro motor
Head: Permalloy

● GENERAL SECTION

Semiconductors: ICs: 8
Transistors: 23 [except E, E(BS)]
24 [for E,E(BS)]
Diodes: 28 [except W, W(UN)]
29 [for W, W(UN)]
LEDs: 14
Varicap: 1
Power Supply: AC: 120V, 60 Hz [for H, HC]
AC: 220V, 50 Hz [for E]
AC: 240V, 50 Hz [for E(BS), AU]
AC: 110—127V/200—220V/230—250V, 50/60 Hz [for W, W(UN)]
DC: 12V [IEC R20 ("D" CELL) x 8 or equipment]
Car: Use 12V car battery adaptor [for W, W(UN)]
Battery life: During playback: 9.5 hours
During recording: 13.5hours
3D switch ON (EIAJ)
Power Consumption: 27W
Power Output: 80W P.M.P. (AC operation) [for E, E(BS)]
100W P.M.P. (AC operation)
[for W, W(UN), AU]
3W x 2 + 4W x 2 (10% T.H.D. DC operation)
Speakers: 12cm, 4 Ω (x 2)
16cm, 4 Ω (x 2)
Dimensions: 650 (W) x 200 (H) x 242 (D) mm
Weight: 6.6 kg (with batteries)

Specifications are subject to change without notice for performance improvement.

PRÉCAUTIONS DE SÉCURITÉ

Les précautions suivantes doivent être observées chaque fois qu'une réparation doit être faite.

1. Etant donné que de nombreux composants de l'appareil possèdent des caractéristiques relatives à la sécurité, utiliser uniquement des pièces de rechange d'origine Hitachi pour effectuer un remplacement. Ceci se rapporte notamment aux pièces critiques du bloc d'alimentation qui ne doivent en aucun cas être remplacées par celles d'autres fabricants. Les pièces critiques sont accompagnés du symbole ⚠ dans le plan de circuit et sur le plan de base.
2. Avant de retourner l'appareil répare au client le technicien doit procéder à un essai complet pour s'assurer qu'il ne présente aucun danger de chocs électriques.

CARACTÉRISTIQUES TECHNIQUES

● SECTION RADIO

Systéme de circuit: 4 gammes d'ondes FM/OC/PO/GO
à superhétérodyne [pour E, E(BS)]
4 gammes d'ondes FM/OC2/OC1/PO(AM)
à superhétérodyne [sauf E, E(BS)]
Gammes d'accord: FM: De 88 à 108 MHz [sauf E, E(BS)]
FM: De 87,5 à 108 MHz [pour E, E(BS)]
OC: De 6 à 18 MHz [pour E, E(BS)]
OC2: De 7 à 22 MHz [sauf E, E(BS)]
OC1: De 2,3 à 7 MHz [sauf E, E(BS)]
PO(AM): De 530 à 1605 kHz
GO: De 150 à 285 kHz [pour E, E(BS)]
Fréquence intermédiaire: FM: 10.7 MHz
OC/PO/GO: 465 kHz [pour E, E(BS)]
OC2/OC1/PO(AM): 455 kHz [sauf E, E(BS)]
Sensibilité: FM: 13 dB (utile)
5 dB (max.)
OC: 30 dB (utile) [pour E, E(BS)]
15 dB (max.) [pour E, E(BS)]
OC2: 30 dB (utile) [sauf E, E(BS)]
20 dB (max.) [sauf E, E(BS)]
OC1: 48 dB (utile) [sauf E, E(BS)]
35 dB (max.) [sauf E, E(BS)]
PO(AM): 50 dB (utile)
35 dB (max.)
GO: 55 dB (utile) [pour E, E(BS)]
40 dB (max.) [pour E, E(BS)]
Antennes (aériens): FM/OC/OC2: antenne télescopique (aérien)
OC1/PO(AM)/GO: antenne à noyau de ferrite incorporée (aérien)

● SECTION LECTEUR-ENREGISTREUR DE CASSETTE

Bande: En cassette
Système de piste: 4 pistes, 2 canaux stéréo
Vitesse de défilement: 4,75 cm/s
Système d'enregistrement: Polarisation c.a. (TAPE2)
Système d'effacement: Aimant (TAPE2)

Système de frèquence en lecture:	Normal: De 50 à 12000 Hz CrO_2: De 50 à 13000 Hz
Rapport signal-bruit:	45 dB
Pleurage et scintillement:	0,25% (watts effic.)
Diaphonie:	Entre les pistes: 60 dB [pour E, E(BS)] 55 dB [sauf E, E(BS)] Entre les canaux: 30 dB
Impédance et sensibilité d'entrée:	CD/entrée ligne: 650 mV, 25 kΩ
Impédance de charge de sortie:	De 8 à 300 Ω (casque)
Distortion:	3%
Moteur:	Micro moteur CC
Tête:	Permalloy

● CARACTÉRISTIQUES GÉNÉRALES

Semi conducteurs:	Circuits intégrés: 8 Transistors: 23 [sauf E, E(BS)] 24 [pour E, E(BS)] Diodes: 28 [sauf W, W(UN)] 29 [pour W, W(UN)] Diodes électroluminescentes: 14 Condensateur variable: 1
Alimentation:	Secteur alternatif: 120V, 60 Hz [pour H, HC] 220V, 50 Hz [pour E] 240V, 50 Hz [pour E(BS), AU] 110−127V/200−220V /230−250V, 50/60 Hz [pour W, W(UN)] Courant continu: 12V [IEC R20 (pile "D") x 8 ou l'équivalent] Voiture: utiliser un adaptateur pour batterie 12V [pour W, W(UN)]
Autonomie des piles:	Lors do la reproduction: 9,5 heures Lors de l'enregistrement: 13,5 heures Commutateur 3D ON (EIAJ)
Consommation électrique:	27W
Niveau de sortie:	80W PMP (fonctionnement sur le secteur) [pour E, E(BS)] 100W PMP (fonctionnement sur le secteur) [pour W, W(UN), AU] 3W x 2 + 4W x 2 (C.C. à 10% D.H.T.)
Haut-parleurs:	12 cm, 4 Ω (x 2) 16 cm, 4 Ω (x 2)
Dimensions:	650 (L) x 200 (H) x 242 (D) mm
Poids:	6.6 kg (piles comprises)

Les caractéristiques techniques peuvent être modifiées sans préavis pour améliorations des performances.

DISASSEMBLY

1. Front case (Fig. 1, 5, 6)
Remove the battery lid. Remove eight screws ① and pull out in the direction of arrow ⓐ. Remove one connector Ⓐ on the MA P.W.B. and one connector Ⓑ on the PA P.W.B..
*See Fig. 5 for connector Ⓐ and Fig. 6 for connector Ⓑ.

2. Top panel (Fig. 1)
Remove the band select konb, volume knob, function select knob, dubbing speed select knob and tape select knob. Open the cassette lid, remove three screws ②, and pull the top panel off in the direction of arrow ⓑ.

3. Cassette lid (Fig. 2)
Once the top panel has removed, press sections Ⓐ and Ⓑ in the direction of the arrow. While pressing the stopper, pull the cassette lid off in the direction of arrow ⓒ.
*Follow the same procedure for both TAPE 1 and TAPE 2.

4. LR P.W.B. (Fig. 3)
Once the front case has been removed, remove one screw ③ and two tabs.

5. LC P.W.B. (Fig. 3)
Once the front case has been removed, remove one screw ④ and two tabs.

6. LL P.W.B. (Fig. 4)
Once the front case has been removed, remove one screw ⑤ and two tabs.

7. VO P.W.B. (Fig. 4)
Pull off in the direction of arrow ⓓ.

8. PS P.W.B. (Fig. 4)
Pull off in the direction of arrow ⓔ.

9. SS P.W.B. (Fig. 4)
Pull off in the direction of arrow ⓕ.

10. OS P.W.B. (Fig. 4)
Pull off in the direction of arrow ⓖ.

11. Handle (Fig. 4)
Press the stopper in the direction of the arrow and pull the handle off in the direction of arrow ⓗ.
*Follow the same procedure for both left and right sides.

12. MA P.W.B. (Fig. 5)
Remove five screws ⑥ and two connectors Ⓒ.

13. Cassette chassis (Fig. 6)
Remove six screws ⑦ and one connector Ⓓ on the PA P.W.B..

14. PH P.W.B. (Fig. 6)
Remove one screw ⑧.

15. PA P.W.B. (Fig. 6)
Remove two screws ⑨ and pull the PA P.W.B. off in the direction of arrow ⓘ.

DÉMONTAGE

1. Boîtier avant (Fig. 1, 5, 6)
Déposer le couvercle du logement des piles. Enlever huit vis ① et tirer dans la direction de la flèche ⓐ. Enlever un connecteur Ⓐ sur la plaquette de circuits imprimés MA et un connecteur sur la plaquette Ⓑ de circuits imprimés PA.
*Voir la Fig. 5 pour le connecteur Ⓐ et la Fig. 6 pour le connecteur Ⓑ.

2. Panneau supérieur (Fig. 1)
Déposer le bouton de sélection de gamme, le bouton de volume, le bouton de sélection de fonction, le bouton de sélection de vitesse de copie et le bouton de sélection de bande. Ouvrir la porte du compartiment cassette, enlever trois vis ② et dégager le panneau supérieur dans la direction de la flèche ⓑ.

3. Porte du compartiment cassette (Fig. 2)
Une fois le panneau supérieur enlevé, appuyer sur les sections Ⓐ et Ⓑ dans la direction de la flèche. Tout en appuyant sur le dispositif d'arrêt, dégager la porte du compartiment cassette dans la direction de la flèche ⓒ.
*Suivre les mêmes procédures pour la platine 1 et la platine 2.

4. Plaquette de circuits imprimés LR (Fig. 3)
Une fois le boîtier avant déposé, enlever une vis ③ et deux agrafes.

5. Plaquette de circuits imprimés LC (Fig. 3)
Une fois le boîtier avant déposé, enlever une vis ④ et deux agrafes.

6. Plaquette de circuits imprimés LL (Fig. 4)
Une fois le boîtier avant déposé, enlever une vis ⑤ et deux agrafes.

7. Plaquette de circuits imprimés VO (Fig. 4)
Tirer dans la direction de la flèche ⓓ.

8. Plaquette de circuits imprimés PS (Fig. 4)
Tirer dans la direction de la flèche ⓔ.

9. Plaquette de circuits imprimés SS (Fig. 4)
Tirer dans la direction de la flèche ⓕ.

10. Plaquette de circuits imprimés OS (Fig. 4)
Tirer dans la direction de la flèche ⓖ.

11. Poignée (Fig. 4)
Appuyer sur le dispositif d'arrêt dans la direction de la flèche et dégager la poignée dans la direction de la flèche ⓗ.
*Suivre les mêmes procédures pour le côté de droite et le côté de gauche.

12. Plaquette de circuits imprimés MA (Fig. 5)
Enlever cinq vis ⑥ et deux connecteurs Ⓒ.

13. Châssis de cassette (Fig. 6)
Enlever six vis ⑦ et un connecteur Ⓓ sur la plaquette de circuits imprimés PA.

14. Plaquette de circuits imprimés PH (Fig. 6)
Enlever une vis ⑧.

15. Plaquette de circuits imprimés PA (Fig. 6)
Enlever deux vis ⑨ et dégager la plaquette de circuits imprimés PA dans la direction de la flèche ⓘ.

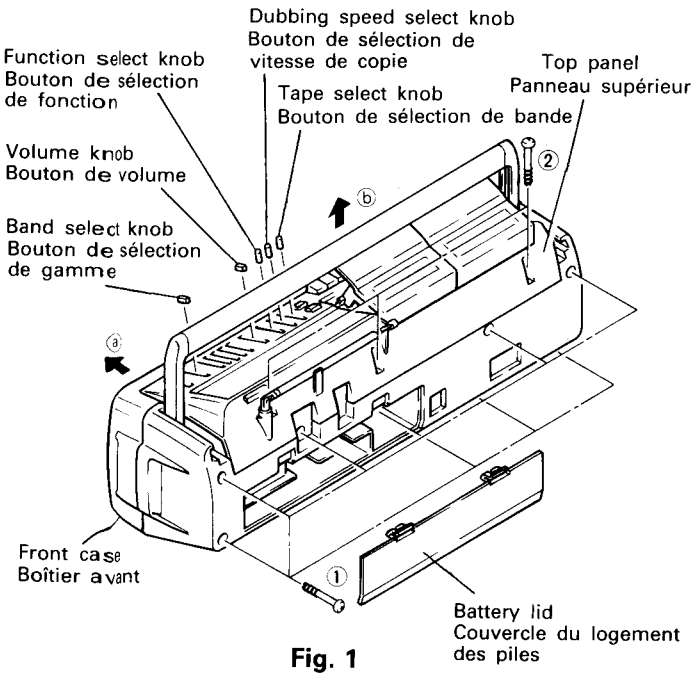


Fig. 1

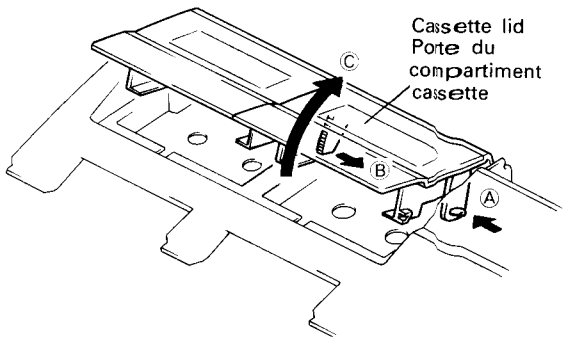


Fig. 2

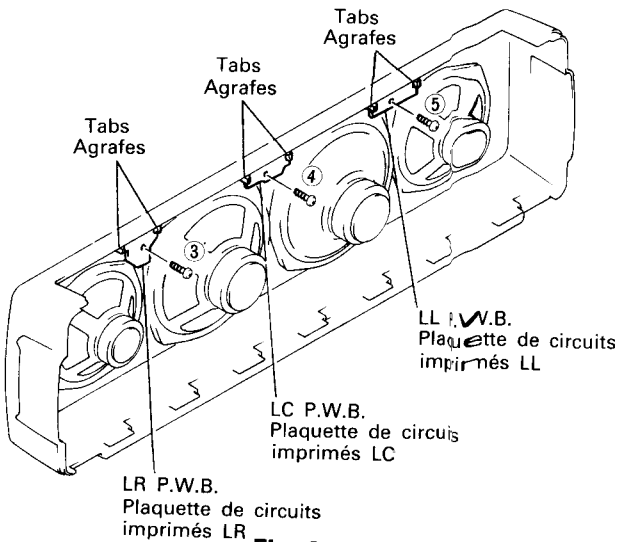


Fig. 3

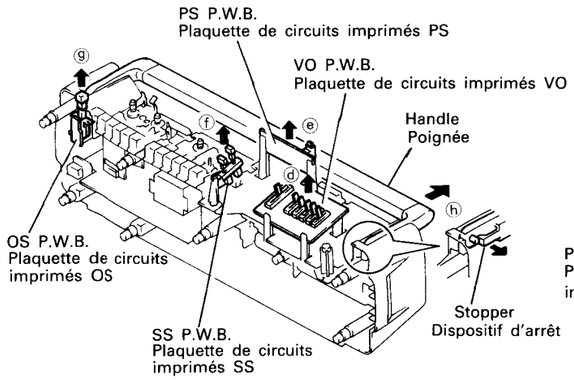


Fig. 4

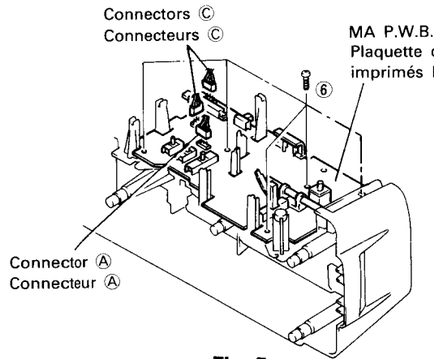


Fig. 5

DIAL CORD STRINGING

Pull the pulley as far as it will go in the clockwise direction and set the pointer to the aligned position.

CHEMINEMENT DU CORDON D'ACCORD

Tirer la poulie à fond dans le sens des aiguilles d'une montre et régler l'index sur la position alignée.

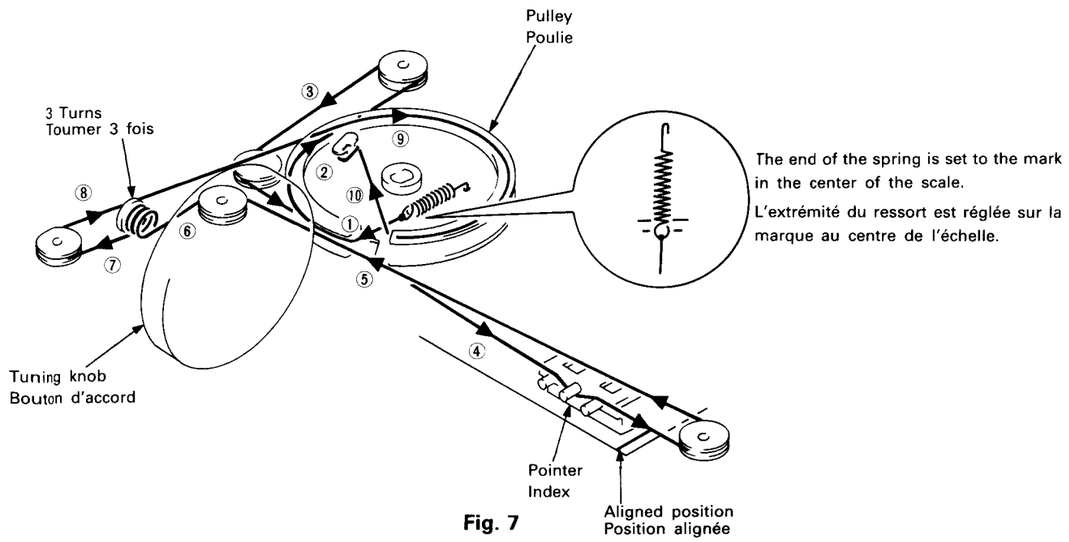


Fig. 7

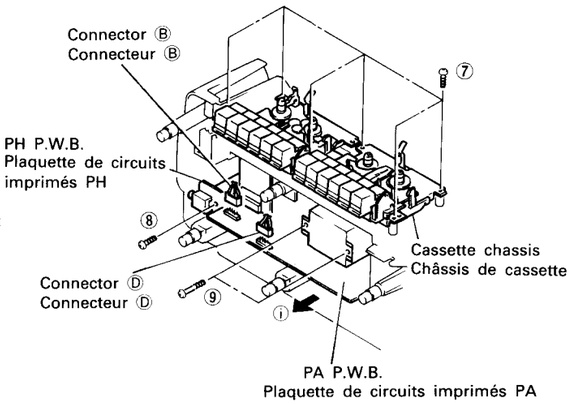


Fig. 6

ADJUSTMENT

1. RADIO SECTION

- **Adjustment point [except E, E(BS)]**

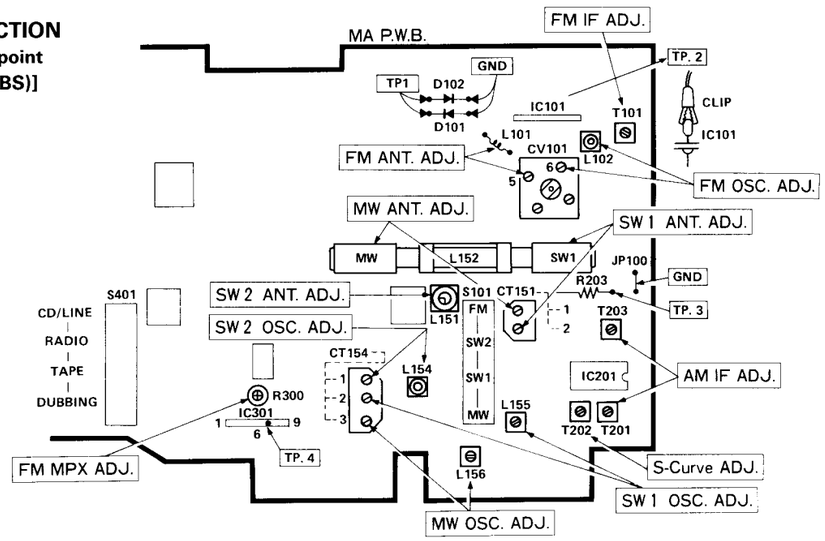


Fig. 8

(1)-1 AM Section except E, E(BS) (FM/SW2/SW1/MW 4-bands)

Step		Adjustment Item	Measuring Instrument and Connection			Genescope or Signal Generator Frequency	Dial Pointer Position	Adjust	Reading
			Measuring Instrument	Input Terminal	Output Terminal				
1	(1)	AM IF	• Genescope (455 kHz)	Ferrite antenna (Note 3)	TP.3	455 kHz	Highest	T201 T203	(Note 1)
	(2)					Repeat step (1)			
2	(1)	SW2 OSC. (Covering)	• AM signal generator (400 Hz, 30% mod.) • VTVM • Oscilloscope	TP.1 (through SW dummy antenna) (Note 2)	TP.3	6.7 MHz	Lowest	L154	Max.
	(2)					23 MHz	Highest	CT154-1	
	(3)					Repeat steps (1) and (2)			
3	(1)	SW2 ANT. (Tracking)				8 MHz	8 MHz	L151	Max.
4	(1)	SW1 OSC. (Covering)	• AM signal generator (400 Hz, 30% mod.) • VTVM • Oscilloscope	Ferrite antenna (Note 3)	TP.3	2.2 MHz	Lowest	L155	Max.
	(2)					7.3 MHz	Highest	CT154-2	
	(3)					Repeat steps (1) and (2)			
5	(1)	SW1 ANT. (Tracking)				2.7 MHz	2.7 MHz	L152 (SW1)	Max.
	(2)					6.3 MHz	6.3 MHz	CT151-2	
	(3)					Repeat steps (1) and (2)			
6	(1)	MW OSC. (Covering)	• AM signal generator (400 Hz, 30% mod.) • VTVM • Oscilloscope	Ferrite antenna (Note 3)	TP.3	515 kHz	Lowest	L155	Max.
	(2)					1,650 kHz	Highest	CT154-3	
	(3)					Repeat steps (1) and (2)			
7	(1)	MW ANT. (Tracking)				600 kHz	600 kHz	L152 (MW)	Max.
	(2)					1,400 kHz	1,400 kHz	CT151-1	
	(3)					Repeat steps (1) and (2)			

● **Adjustment points [for E, E(BS)]**

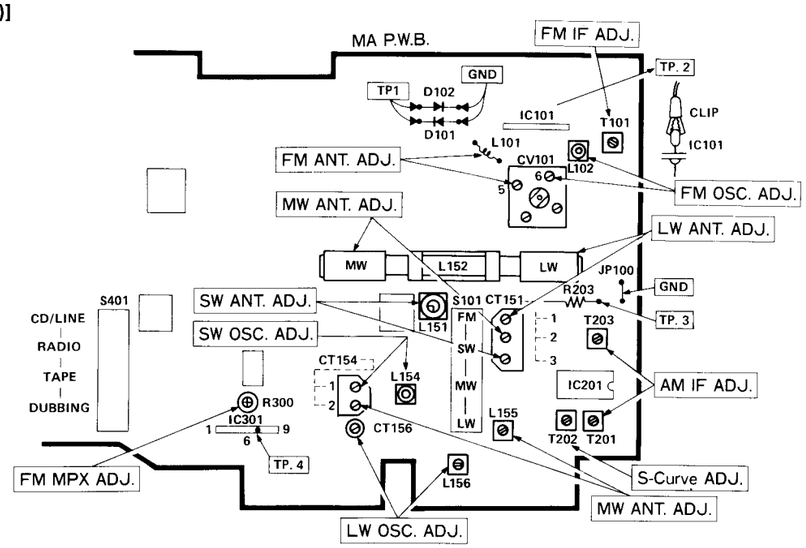


Fig. 9

(1)-2 AM Section for E, E(BS) (FM/SW/MW/LW 4-bands)

Step		Adjustment Item	Measuring Instrument and Connection: Measuring Instrument	Input Terminal	Output Terminal	Genescope or Signal Generator Frequency	Dial Pointer Position	Adjust	Reading
1	(1)	AM IF	• Genescope (465 kHz)	Ferrite antenna (Note 3)	TP.3	465 kHz	Highest	T201 T203	(Note 1)
	(2)					Repeat step (1)			
2	(1)	SW OSC. (Covering)	• AM signal generator (400 Hz, 30% mod.) • VTVM • Oscilloscope	TP.1 (through SW dummy antenna) (Note 2)	TP.3	5.8 MHz	Lowest	L154	Max.
	(2)					18.5 MHz	Highest	CT154-1	
	(3)					Repeat steps (1) and (2)			
3	(1)	SW ANT. (Tracking)				6.5 MHz	6.5 MHz	L151	Max.
	(2)					16 MHz	16 MHz	CT151-3	
	(3)					Repeat steps (1) and (2)			
4	(1)	MW OSC. (Covering)	• AM signal generator (400 Hz, 30% mod.) • VTVM • Oscilloscope	Ferrite antenna (Note 3)	TP.3	515 kHz	Lowest	L155	Max.
	(2)					1,650 kHz	Highest	CT154-2	
	(3)					Repeat steps (1) and (2)			
5	(1)	MW ANT. (Tracking)				600 kHz	600 kHz	L152 (MW)	Max.
	(2)					1,400 kHz	1,400 kHz	CT151-2	
	(3)					Repeat steps (1) and (2)			
6	(1)	LW OSC. (Covering)	• AM signal generator (400 Hz, 30% mod.) • VTVM • Oscilloscope (RIF switch:B)	Ferrite antenna (Note 3)	TP.3	145 kHz	Lowest	L156	Max.
	(2)					290 kHz	Highest	CT156	
	(3)					Repeat steps (1) and (2)			
7	(1)	LW ANT. (Tracking)				160 kHz	160 kHz	L152 (LW)	Max.
	(2)					270 kHz	270 kHz	CT151-1	
	(3)					Repeat steps (1) and (2)			

(2)-1 FM Section

*( ) For W. Germany and Italy

Step		Adjustment Item	Measuring Instrument and Connection: Measuring Instrument	Input Terminal	Output Terminal	Genescope or Signal Generator Frequency	Dial Pointer Position	Adjust	Reading
1	(1)	FM IF	Turn T202 fully counterclockwise			10.7 MHz	Highest	T101	(Note 4)
	(2)	S-Curve	• Genescope (10.7 MHz)	TP.2	TP.3			T202	(Note 5)
2	(1)	FM OSC (Covering)	• FM signal generator (400 Hz, 30% dev.) • Oscilloscope • VTVM	TP.1 (through FM dummy antenna) (Note 6)	TP.3	87 MHz *(87.5 MHz)	Lowest	L102	Max.
	(2)					109 MHz *(108 MHz)	Highest	CV101-6	
	(3)					Repeat steps (1) and (2)			
3	(1)	FM ANT. (Tracking)				90 MHz	90 MHz	L101	Max.
	(2)					106 MHz	106 MHz	CV101-5	
	(3)					Repeat steps (1) and (2)			
4	(1)	FM MPX (Multiplex)	• Frequency counter	Connect a 10μF/25V electrolytic capacitor between the NO. 1 pin of IC301 and GND	TP.4 (No. 6 pin of IC301)	—	—	R300	38 kHz ± 50 Hz (Note 7)

Note:

1. Feed in a weak signal from the genescope. Adjust T201, T203 for maximum gain and the waveform of Fig. 10.

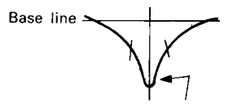


Fig. 10

2. SW dummy antenna shows Fig. 11.

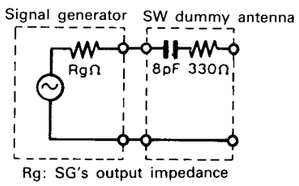


Fig. 11

3. Connect AM signal generator to loop antenna, bring near to ferrite antenna.
4. Feed in a weak signal to TP2 from the genescope. Adjust T101 for maximum gain and the waveform indicated in Fig. 12. If the center of the waveform cannot be lined up on the marker, adjust the right/left balance.

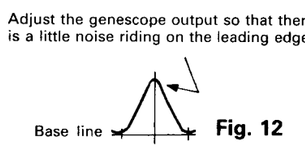


Fig. 12

5. Use the T202 core to form the S-curve shown in Fig. 13. Adjust the symmetry of A and B about point C for linearity.

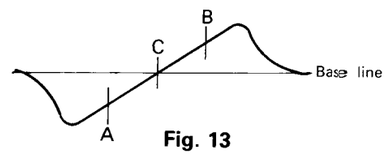


Fig. 13

6. FM dummy antenna shows Fig. 14.

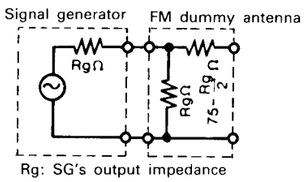


Fig. 14

7. Connect the frequency counter to the No. 6 pin of IC301 and connect a 330kΩ resister parallel with the frequency counter.

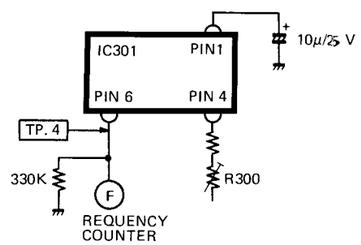


Fig. 15

2. TAPE RECORDER SECTION

Perform the following adjustments in the sequence stated after cleaning the head, pressure roller, and capstan with a head cleaning stick moistened in alcohol. (Note 1)

Step	Adjustment Item	Measuring Instrument and Connection			Check Tape	Mode	Adjust	Reading
		Measuring Instrument	Input Terminal	Output Terminal				
1	Tape speed (Note 3)	• Frequency counter	—	Headphones Jack	Tape speed adjustment tape (3kHz)	Playback (TAPE 2)	R661	3kHz±20Hz (Note 2)
2	Head azimuth	• VTVM	—	Headphones Jack	Head azimuth adjustment tape (10kHz)	Playback	Azimuth adjusting screw. (Fig. 16)	Output max. (Note 4)

Note:

1. Adjust within 30 sec. after heat-running for more than 20 minutes.
2. Should be confirm at TAPE 1 both in the FORWARD and REVERSE directions if the reading is outside the range of adjustment value, make readjustment so that the reading would be 2,975 to 3,030 Hz both in the FORWARD and REVERSE directions. (Forward and reverse switching cannot be performed with E or E(BS). Use this control for one-way operation.)
3. High speed adjustment is not necessary.
4. When the maximum values of both channels are different, adjust to the maximum value of the L channel. In this case, the difference between the maximum values of both channels should be within 2 dB.
(Should be confirm REVERSE direction at TAPE 1. When adjusting TAPE 1, forward and reverse switching cannot be performed with E or E(BS). Use this control for one-way operation.)

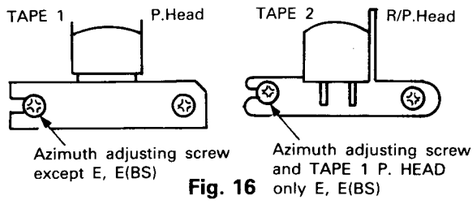


Fig. 16

3. Cassette Chassis Inspection

No.	Inspection item	Reference value	Remarks
1	Playback torque	TN-521: 27 to 60 g·cm	
		TN-21: 30 to 60 g·cm	
2	FF/REW torque	TN-521: 55 to 120 g·cm	
		TN-21: 55 to 120 g·cm	
3	Supply back-tension	TN-521: 1.8 to 5.0 g·cm	
		TN-21: 1 to 4 g·cm	
4	Tape drive force	TN-521: Over 50 g (TAPE 1) Over 100 g (TAPE 2)	
		TN-21: Over 100 g	

LUBRICATION

Apply one or two drops of pan motor oil or sonic slider oil to rotating parts. Coat sliding parts with Molycoat (EL-10M). Lubricate once a year or every 1,000 hours of operation. Do not let oil contact belts or idlers.

Rotating parts	Metal to metal	Pan motor oil (10W-40)
	Plastics to metal	Sonic slider oil (#1600)
Sliding parts	(Note) Plastics to plastics Plastics to metal	Molycoat (EL-10M)
Spring vibration prevention		Floyl (GB-TS-1)

NOTE:
When front frame and slide knob are replaced, coat both contacting parts lightly with white grease.

MAINTENANCE

■ **Clean cabinet and panels when dirty**

Clean off dirt on the surfaces with a dry cloth. Never use thinners, benzene or alcohol since these will damage the surface finish.

RÉGLAGE

1. SECTION RADIO

● **Points de réglage [sauf E, E(BS)]**

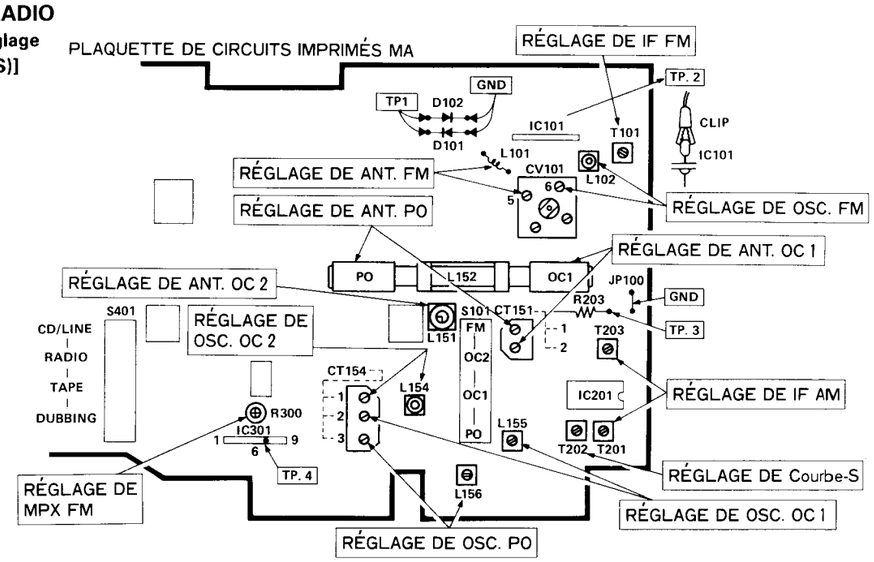


Fig. 8

(1)-1 Section AM sauf E, E(BS) (FM/OC2/OC1/PO 4 gammes)

Etape		Objet de réglage	Instrument de mesure et branchements			Généscope ou fréquence du générateur de signal	Position de l'aiguille du cadran	Réglage	Lecture
			Instrument de mesure	Borne d'entrée	Borne de sortie				
1	(1)	IF AM	• Généscope (455 kHz)	Antenne noyau en ferrite (Remarque 3)	TP.3	455 kHz	La plus haute	T201 T203	(Remarque 1)
	(2)					Répéter étape (1)			
2	(1)	OSC. OC2 (coverture)	• Générateur de signal AM (400 Hz, mod. 30%) • VTVM • Oscilloscope	TP.1 (par le biais d'une antenne OC fictive) (Remarque 2)	TP.3	6,7 MHz	La plus basse	L154	Max.
	(2)					23 MHz	La plus haute	CT154-1	
	(3)					Répéter les étapes (1) et (2)			
3	(1)	ANT. OC2 (poursuite)				8 MHz	8 MHz	L151	Max.
4	(1)	OSC. OC1 (coverture)		Antenne noyau en ferrite (Remarque 3)		2,2 MHz	La plus basse	L155	Max.
	(2)					7,3 MHz	La plus haute	CT154-2	
	(3)					Répéter les étapes (1) et (2)			
5	(1)	ANT. OC1 (poursuite)				2,7 MHz	2,7 MHz	L152 (OC1)	Max.
	(2)					6,3 MHz	6,3 MHz	CT151-2	
	(3)					Répéter les étapes (1) et (2)			
6	(1)	OSC. PO (coverture)				515 kHz	La plus basse	L156	Max.
	(2)					1650 kHz	La plus haute	CT154-3	
	(3)					Répéter les étapes (1) et (2)			
7	(1)	ANT. PO (poursuite)				600 kHz	600 kHz	L152 (PO)	Max.
	(2)					1400 kHz	1400 kHz	CT151-1	
	(3)					Répéter les étapes (1) et (2)			

● **Points de réglage [pour E, E(BS)]**

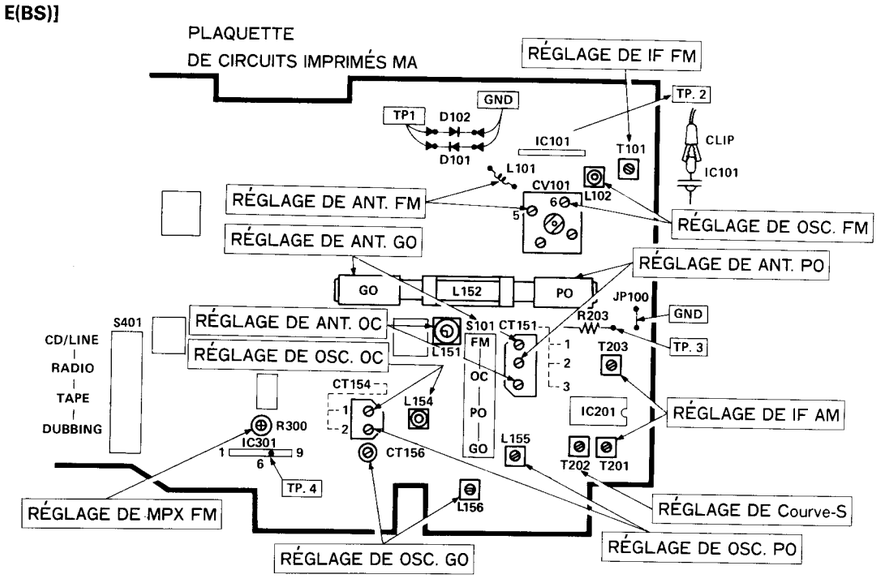


Fig. 9

(1)-2 Section AM pour E, E(BS) (FM/OC/PO/GO 4 gammes)

Etape		Objet du réglage	Instrument de mesure et branchements			Générateur ou fréquence du générateur de signal	Position de l'aiguille du cadran	Réglage	Lecture
			Instrument de mesure	Borne d'entrée	Borne de sortie				
1	(1)	IF AM	• Générateur (465 kHz)	Antenne noyau en ferrite (Remarque 3)	TP.3	465 kHz	La plus haute	T201 T203	(Remarque 1)
	(2)					Répéter étape (1)			
2	(1)	OSC. OC (coverture)	• Générateur de signal AM (400 Hz, mod. 30%) • VTVM • Oscilloscope	TP.1 (par le biais d'une antenne OC fictive) (Remarque 2)	TP.3	5,8 MHz	La plus basse	L154	Max.
	(2)					18,5 MHz	La plus haute	CT154-1	
	(3)					Répéter les étapes (1) et (2)			
3	(1)	ANT. OC (poursuite)				6,5 MHz	6,5 MHz	L151	Max.
	(2)					16 MHz	16 MHz	CT151-3	
	(3)					Répéter les étapes (1) et (2)			
4	(1)	OSC. PO (coverture)	• Générateur de signal AM (400 Hz, mod. 30%) • VTVM • Oscilloscope	Antenne noyau en ferrite (Remarque 3)	TP.3	515 kHz	La plus basse	L155	Max.
	(2)					1650 kHz	La plus haute	CT154-2	
	(3)					Répéter les étapes (1) et (2)			
5	(1)	ANT. PO (poursuite)				600 kHz	600 kHz	L152 (PO)	Max.
	(2)					1400 kHz	1400 kHz	CT151-2	
	(3)					Répéter les étapes (1) et (2)			
6	(1)	OSC. GO (coverture)	• Générateur de signal AM (400 Hz, mod. 30%) • VTVM • Oscilloscope	Antenne noyau en ferrite (Remarque 3)	TP.3	145 kHz	La plus basse	L156	
	(2)					290 kHz	La plus haute	CT156	
	(3)					Répéter les étapes (1) et (2)			
7	(1)	ANT. GO (poursuite)				160 kHz	160 kHz	L152 (GO)	
	(2)					270 kHz	270 kHz	CT151-1	
	(3)					Répéter les étapes (1) et (2)			

(2)-1 Section FM

***( ) pour la RFA et Italie.**

Etape		Objet du réglage	Instrument de mesure et branchement			Générateur ou fréquence du générateur de signal	Position de l'aiguille du cadran	Réglage	Lecture
			Instrument de mesure	Borne d'entrée	Borne de sortie				
1	(1)	IF FM	Tourner T202 à fond dans le sens des aiguilles d'une montre.			10,7 MHz	La plus haute	T101	(Remarque 4)
	(2)	Courbe-S	• Générateur (10,7 MHz)	TP.2	TP.3			T202	(Remarque 5)
2	(1)	OSC. FM (coverture)	• Générateur de signal FM (400 Hz, dév. 30%) • Oscilloscope • VTVM	TP.1 (par le biais d'une antenne FM fictive) (Remarque 6)	TP.3	* 87 MHz (87,5 MHz)	La plus basse	L102	Max.
	(2)					* 109 MHz (108 MHz)	La plus haute	CV101-6	
	(3)					Répéter les étapes (1) et (2)			
3	(1)	ANT. FM (poursuite)				90 MHz	90 MHz	L101	Max.
	(2)					106 MHz	106 MHz	CV101-5	
	(3)					Répéter les étapes (1) et (2)			
4	(1)	MPX FM (Multiplex)	• Fréquencemétre	Brancher un condensateur électrolytique de 10μF/25V entre la broche n° 1 du IC301 et la masse (GND).	TP. 4 (Broche n° 6 du IC301)	—	—	R300	38 kHz ± 50 Hz (Remarque 7)

Remarque:

1. Appliquer un signal faible du généscope. Régler T201 et T203 afin d'obtenir un gain maximum et la forme d'onde de la Fig. 10.

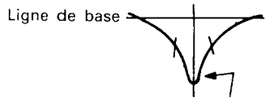


Fig. 10

2. Antenne OC fictive

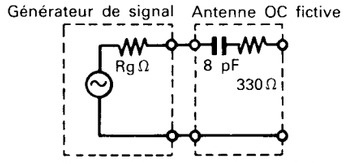


Fig. 11

3. Relier le générateur de signal AM à l'antenne-cadre. La rapprocher de l'antenne noyau en ferrite.
4. Appliquer un signal faible du généscope sur TP2. Régler T101 afin d'obtenir un gain maximum et la forme d'onde de la Fig. 12. Si le centre de la forme d'onde ne peut pas être aligné sur le marqueur, régler la balance droite/gauche.

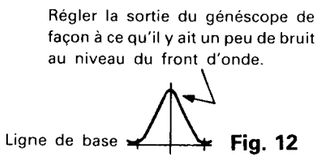


Fig. 12

5. Utiliser le noyau de T202 pour former la courbe-S indiquée sur la Fig. 13. Régler la symétrie de A et B au niveau du point C pour la linéarité.

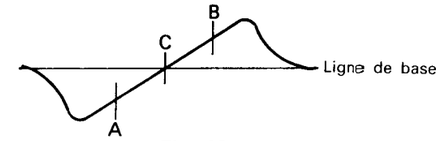


Fig. 13

6. Antenne FM fictive

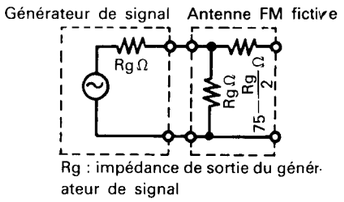


Fig. 14

7. Relier le fréquencemètre sur la broche n°6 du IC301 et brancher une résistance de 330 kΩ en parallèle avec le fréquencemètre.

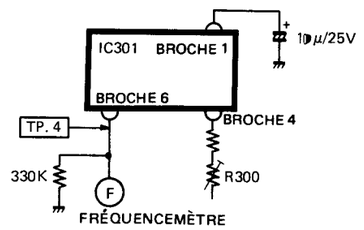


Fig. 15

2. SECTION LECTEUR-ENREGISTREUR DE CASSETTE

Effectuer les réglages suivants dans l'ordre indiqué après avoir nettoyé la tête, le galet-presseur et le cabestan avec un coton-tige imbibé d'alcool. (Remarque 1)

Etape	Objet de réglage	Instrument de mesure et branchements			Band de vérification	Mode	Réglage	Lecture
		Instrument de mesure	Borne d'entrée	Borne de sortie				
1	Vitesse de défilement (Remarque 3)	• Fréquence-mètre	—	Jack casque	Bande de réglage de vitesse de défilement (3 kHz)	Reproduction (Platine 2)	R611	3 kHz ± 20 Hz (Remarque 2)
2	Azimuth de tête	• VTVM	—	Jack casque	Bande de réglage d'azimuth de tête (10 kHz)	Reproduction	Vis de réglage d'azimuth Fig. 16	Sortie max. (Remarque 4)

Remarque :

1. Régler dans une plage de 30 sec. après une mise sous tension de 20 minutes au moins.
2. Vérifier la Platine 1 à la fois dans les directions FORWARD (avant) et REVERSE (arrière). Si la lecture est en dehors de la plage des valeurs de réglage, faire le réglage de façon à ce que la lecture soit entre 2975 et 3030 Hz dans les directions FORWARD (avant) et REVERSE (arrière). (Il n'est pas possible d'effectuer la commutation du sens de défilement FORWARD(avant) / REVERSE(arrière) avec E ou E(BS). Utiliser cette commande pour le fonctionement dans un seul sens de défilement.)
3. Le réglage à haute vitesse n'est pas nécessaire.
4. Si les valeurs maximales des deux canaux différent, régler sur la valeur maximale du canal de gauche (L). Dans ce cas, la différence entre les valeurs maximales des deux canaux doit être comprise dans une plage de 2 dB.

(Vérifier dans la direction REVERSE (arrière) sur la Platine 1. Si vous réglage et Platine 1, Il n'est pas possible d'effectuer la commutation du sens de défilement FORWARD (avant)/REVERSE (arrière) avec E ou E(BS). Utiliser cette commande pour le fonctionnement dans un seul sens de défilement.)

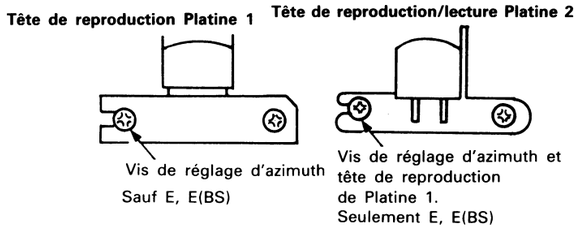

Tête de reproduction Platine 1
Tête de reproduction/lecture Platine 2
Vis de réglage d'azimuth
Sauf E, E(BS)
Vis de réglage d'azimuth et tête de reproduction de Platine 1.
Seulement E, E(BS)

Fig. 16

3. Réglage du châssis de cassette

No.	Point d'inspection	Valeur de référence	Observation
1	Couple en lecture	TN-521: De 27 à 60 g·cm	
		TN-21: De 30 à 60 g·cm	
2	Couple avance rapide /rebobinage	TN-521: De 55 à 120 g·cm	
		TN-21: De 55 à 120 g·cm	
3	Tension bobine débitrice	TN-521: De 1,8 à 5,0 g·cm	
		TN-21: De 1 à 4 g·cm	
4	Force de défilement de band	TN-521: Plus de 50 g (TAPE 1) Plus de 100 g (TAPE 2)	
		TN-21: Plus de 100 g	

LUBRIFICATION

Appliquer une ou deux gouttes d'huile moteur ou d'huile Sonic pour curseur, sur les membres rotatifs. De la graisse Molycoat (EL-10M) est appliquée sur les membres coulissants.
Lubrifier une fois par an ou toutes les 1 000 heures de fonctionnement.
Veiller à ne pas appliquer d'huile sur les courroies ou les galets.

Membres rotatifs	Entre les parties métalliques	Huile moteur (10W-40)
	Entre le moulage et les parties métalliques	Huile Sonic pour curseur (#1600)
Membres coulissants	(Remarque) Entre moulures Entre moulures et piéces métalliques	Molycoat (EL-10M)
Prévention de vibration de ressort		Floyl (GB-TS-1)

Remarque:
Lorsque le châssis avant et le bouton curseur doivent être remplacés, appliquer une couche légère de graisse blanche sur les parties de contact.

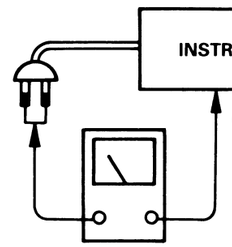
ENTRETIEN

■ **Nettoyage du coffret et des panneaux lorsqu'ils sont sales**

Enlever la poussière des surfaces de l'appareil avec un chiffon sec. Ne jamais utiliser de solvants, de benzine ou d'alcool car ils abîmeraient le fini des surfaces.

Check that exposed parts are acceptably insulated from the supply circuit before returning the instrument repaired to the customer.

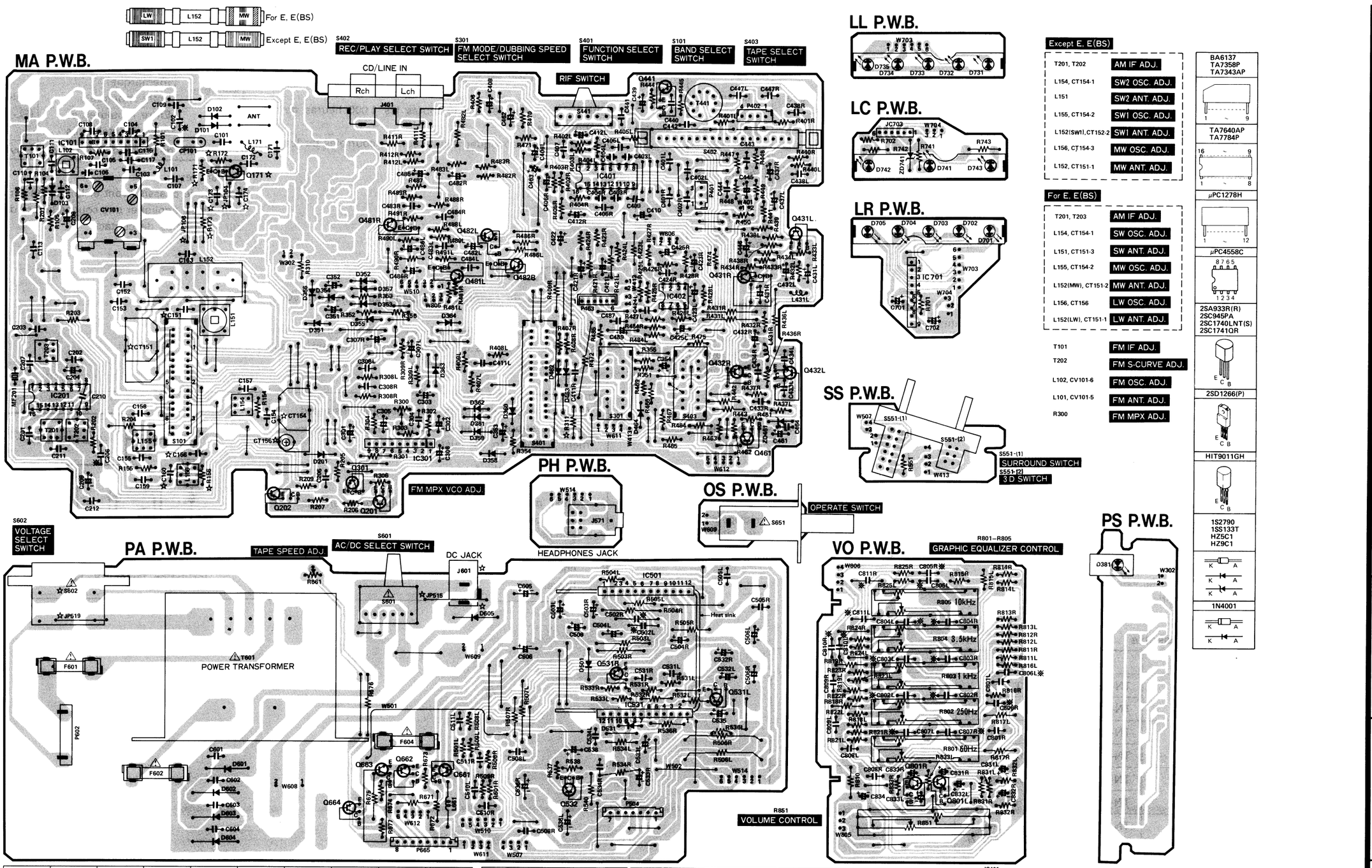
- **Checking method**
  Operate switch is set to ON.
  Next, measure the resistance value between the both poles of attachment cup (Power supply plug) and the exposed parts (Parts such as Knob, Cover, etc. where the customer is easy to touch.) and check that the resistance value is 500 kohms or more.



Insulation tester (DC 500V)

PRINTED WIRING BOARD · PLAN DE BASE

※ : Axial lead cylindrical ceramic capacitor.
※ : Condensateur céramique clindrique à conducteur axial.



Except E, E(BS)	
T201, T202	AM IF ADJ.
L154, CT154-1	SW2 OSC. ADJ.
L151	SW2 ANT. ADJ.
L155, CT154-2	SW1 OSC. ADJ.
L152(SW1), CT152-2	SW1 ANT. ADJ.
L156, CT154-3	MW OSC. ADJ.
L152, CT151-1	MW ANT. ADJ.

For E, E(BS)	
T201, T203	AM IF ADJ.
L154, CT154-1	SW OSC. ADJ.
L151, CT151-3	SW ANT. ADJ.
L155, CT154-2	MW OSC. ADJ.
L152(MW), CT151-2	MW ANT. ADJ.
L156, CT156	LW OSC. ADJ.
L152(LW), CT151-1	LW ANT. ADJ.

T101	FM IF ADJ.
T202	FM S-CURVE ADJ.
L102, CV101-6	FM OSC. ADJ.
L101, CV101-5	FM ANT. ADJ.
R300	FM MPX ADJ.

BA6137
TA7358P
TA7343AP

TA7640AP
TA7784P

μPC1278H

μPC4558C

2SA933R(R)
2SC945PA
2SC1740LNT(S)
2SC1741QR

2SD1266(P)

HIT9011GH

1S2790
1SS133T
HZ5C1
HZ9C1

1N4001

☆ SYMBOL	E, E(BS)	H, HC	AU	W, W(UN)
CT151				
CT154				
C151	USE	—	—	—
C156	—	USE	USE	USE
C160	USE	—	—	—
C173	USE	—	—	—
C174	USE	—	—	—
D605	—	—	—	USE
JP104	—	USE	USE	USE
JP106	USE	—	—	—

☆ SYMBOL	E, E(BS)	H, HC	AU	W, W(UN)
J601	—	—	—	USE
Q171	USE	—	—	—
R156	—	USE	USE	USE
R171	USE	—	—	—
R172	USE	—	—	—
R173	USE	—	—	—
R311	Jumper	USE	USE	USE
S602	—	—	—	USE
CT156	USE	—	—	—
JP519	USE	USE	USE	—
JP515	USE	USE	USE	—

	E	C	B
Q171	0 [0.2]	0 [7.8]	0 [0.9]
Q201	0	0 (7.9)	0 (0.7)
Q202	6.9 (6.5)	6.9 (0)	6.2 (7.9)
Q301	8.5	8.5 (7.8)	7.8 (7.9)
Q431LR	0 (1.4)	0 (5.4)	0 (2.0)
Q432LR	0	0	0.6
Q441	0 (0.2)	0 (3.6)	0 (0.8)
Q461	8.5	11.9	9.1
Q481LR	6.4	8.1	6.7

	E	C	B
Q482LR	0	0	0.7
Q531LR	0	0	0
Q532	11.9	0	11.3
Q661	0	0	0.6
Q662	0	2.6	0
Q663	0	0	0.7
Q664	11.9	11.4	11.2
Q801LR	0.6	3.8	1.2

( ):FM [ ]SW for E E(BS)

Pin No.	1	2	3	4	5	6	7	8	9
IC101	0 (0.8)	0 (1.6)	0 (4.9)	0 (1.5)	0	0 (4.9)	0 (4.1)	0 (4.8)	0 (4.9)
IC301	3.5	7.1	8.5	6.7	0	6.9	8.5 (7.8)	4.3	4.3

( ): FM

IC201

Pin No.	1	2	3	4	5	6	7	8
Voltage	1.5 (0.1)	1.5 (0.5)	0 2.3 (1.8)	2.3	0.9	0.9	0 (0.3)	0
Pin No.	9	10	11	12	13	14	15	16
Voltage	1.4	6.9 (6.5)	6.9 (6.5)	1.4	1.4	1.4	1.4	6.9 (6.5)

IC401

Pin No.	1	2	3	4	5	6	7	8
Voltage	7.4	2.2	1.7	2.2	2.2	2.2	2.2	0
Pin No.	9	10	11	12	13	14	15	16
Voltage	2.2	0	2.2	2.2	2.2	2.2	0	2.2

IC402

Pin No.	1	2	3	4	5	6	7	8
Voltage	4.7	4.7	4.7	0	4.7	4.7	4.7	8.5

IC701

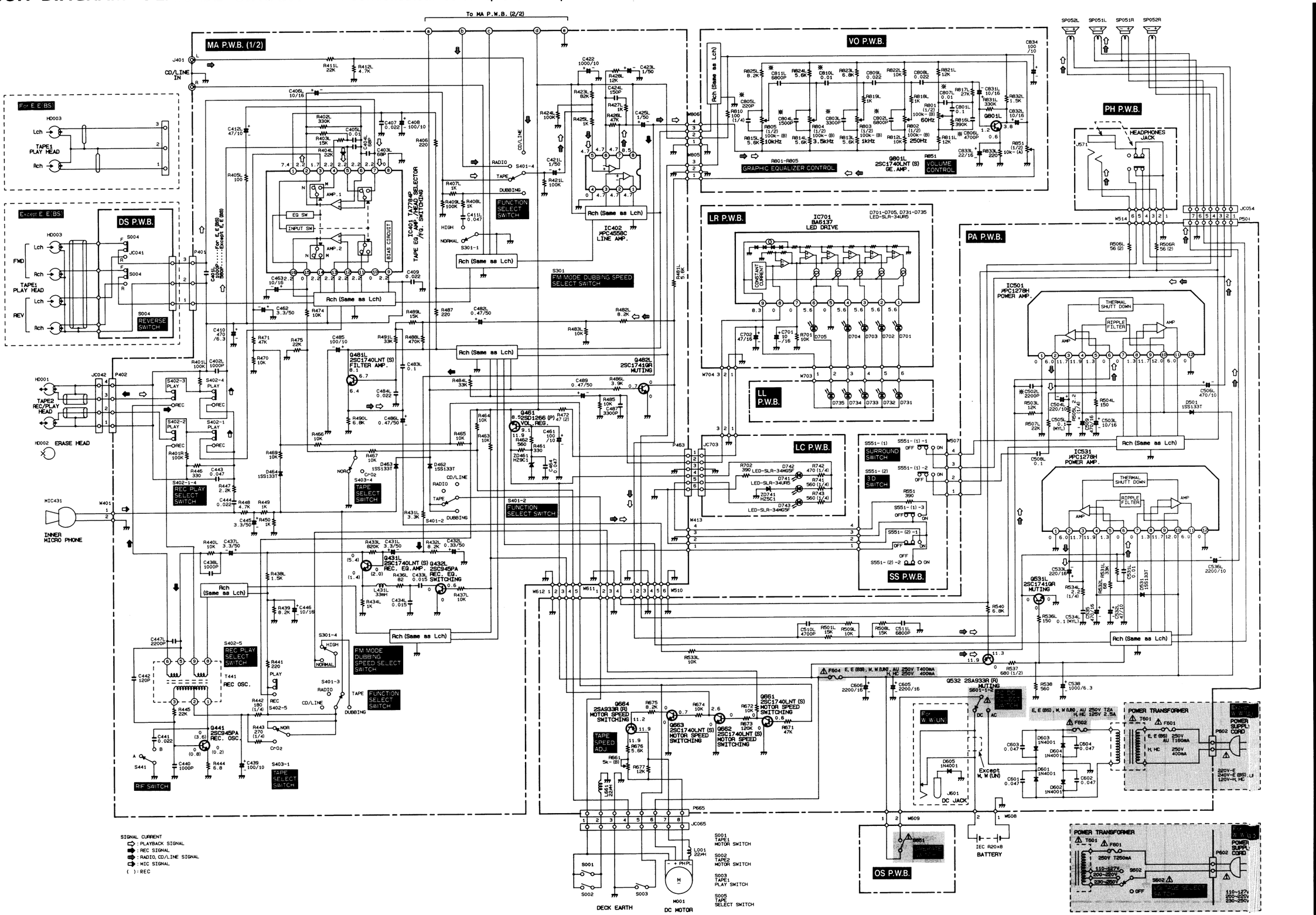
Pin No.	1	2	3	4	5	6	7	8	9
Voltage	5.6	5.6	5.6	5.6	0	5.6	0	0	8.3

IC501, 531

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12
Voltage	0	6.0	11.7	11.9	1.3	0	0	1.3	11.7	12.0	6.0	0

CIRCUIT DIAGRAM · PLAN DE CIRCUIT

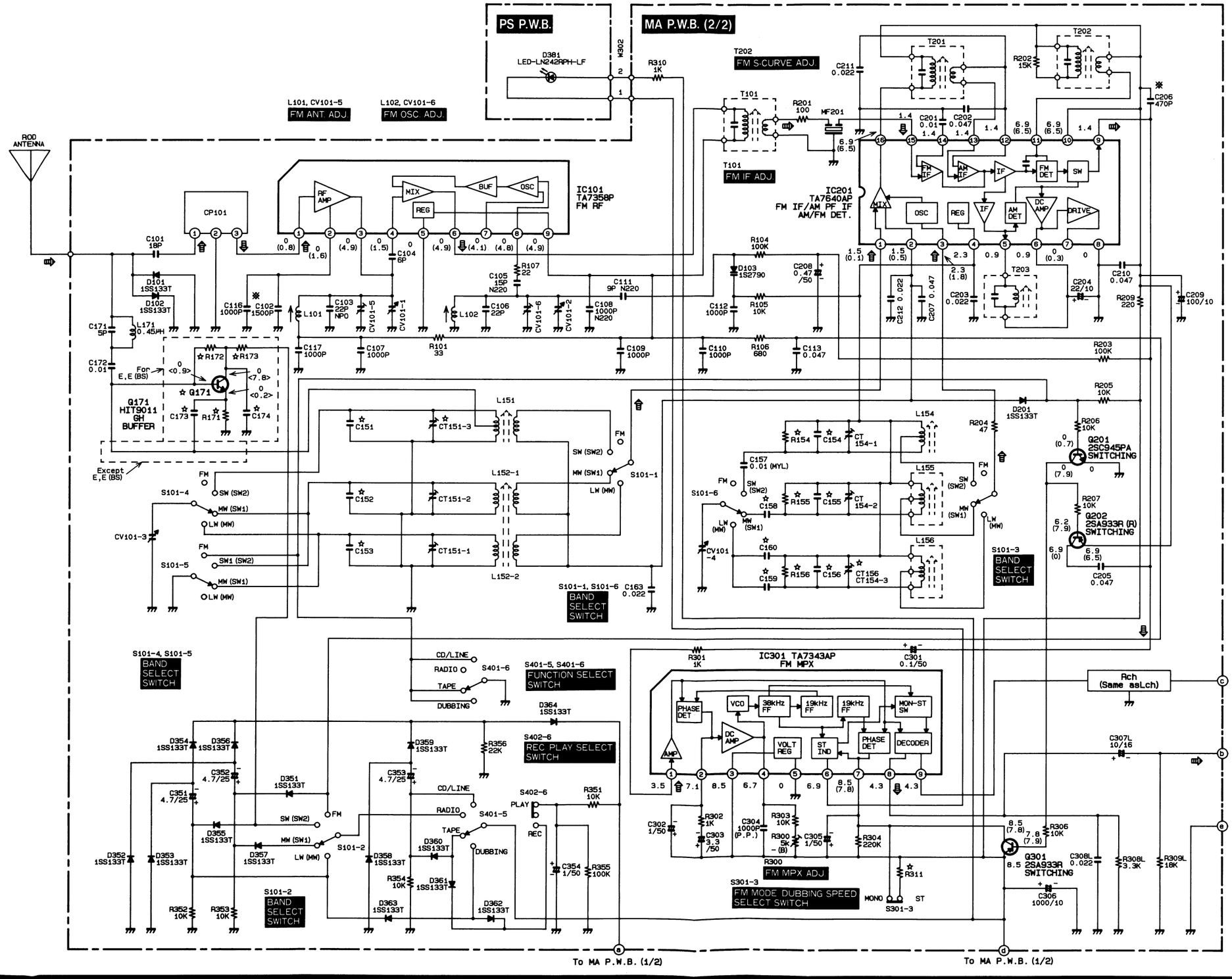
※ : Axial lead cylindrical ceramic capacitor.
※ : Condensateur céramique clindrique à conducteur axial.



CIRCUIT DIAGRAM · PLAN DE CIRCUIT

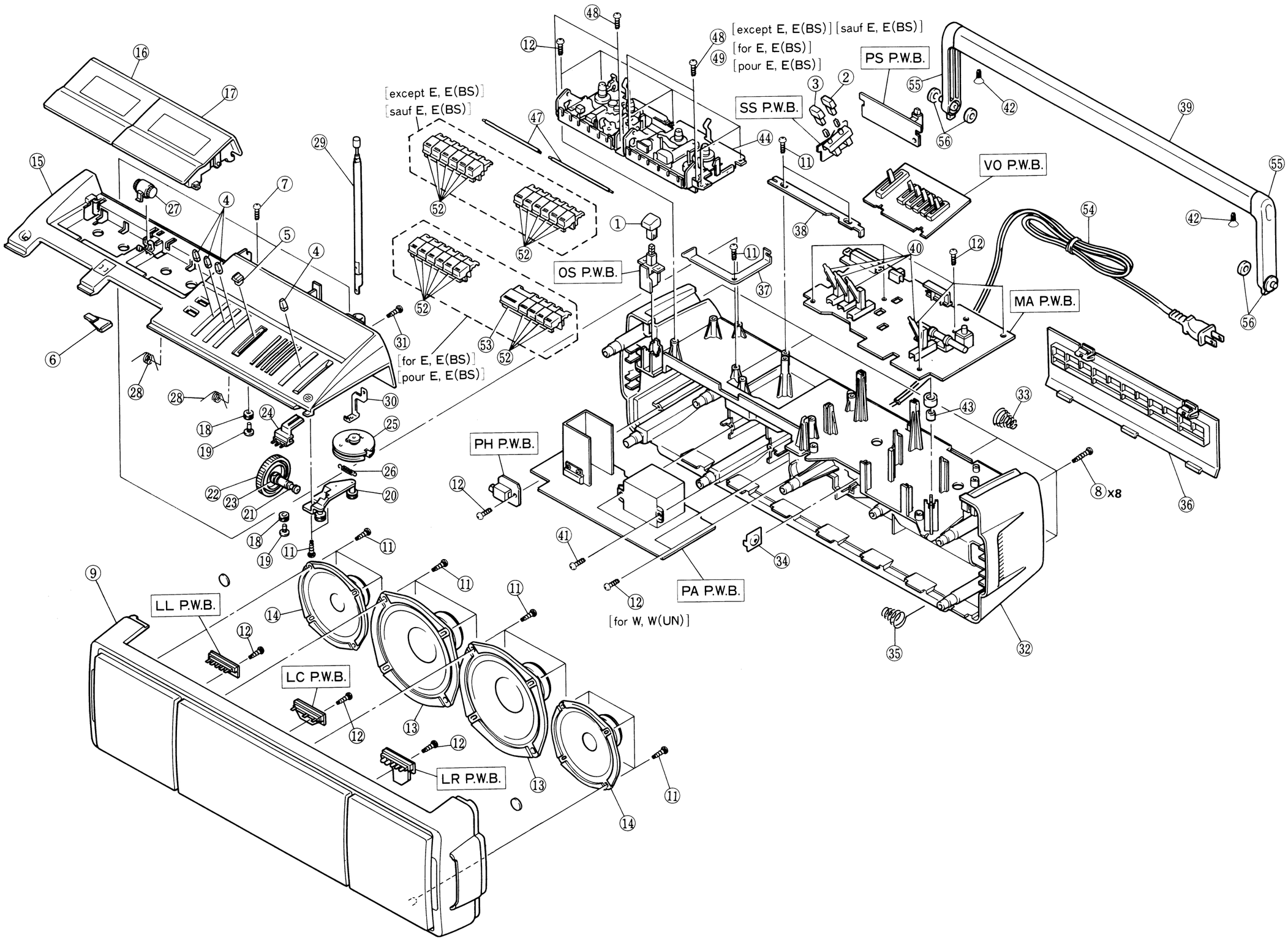
※ : Axial lead cylindrical ceramic capacitor.
※ : Condensateur céramique clindrique à conducteur axial.

☆No.	C151	C152	C153	C154	C155	C156	C158	C159	C160	C173	C174	R154	R155	R156	R171	R172	R173	R311	Q171	CT151-3	CT154-3, CT156
E,E (BS)	12P	10P	82P	22P NPO	18P	——	360P (P.P.)	180P (STY)	120P	0.01	0.022	18K	18K	——	100	330K	390	Jumper	Use	Use	CT156
exceptE, E (BS)	——	6P	10P	15P N750	8P	12P	1500P (P.P.)	360P (P.P.)	——	——	——	22K	15K	15K	——	——	——	1K	——	——	CT154-3



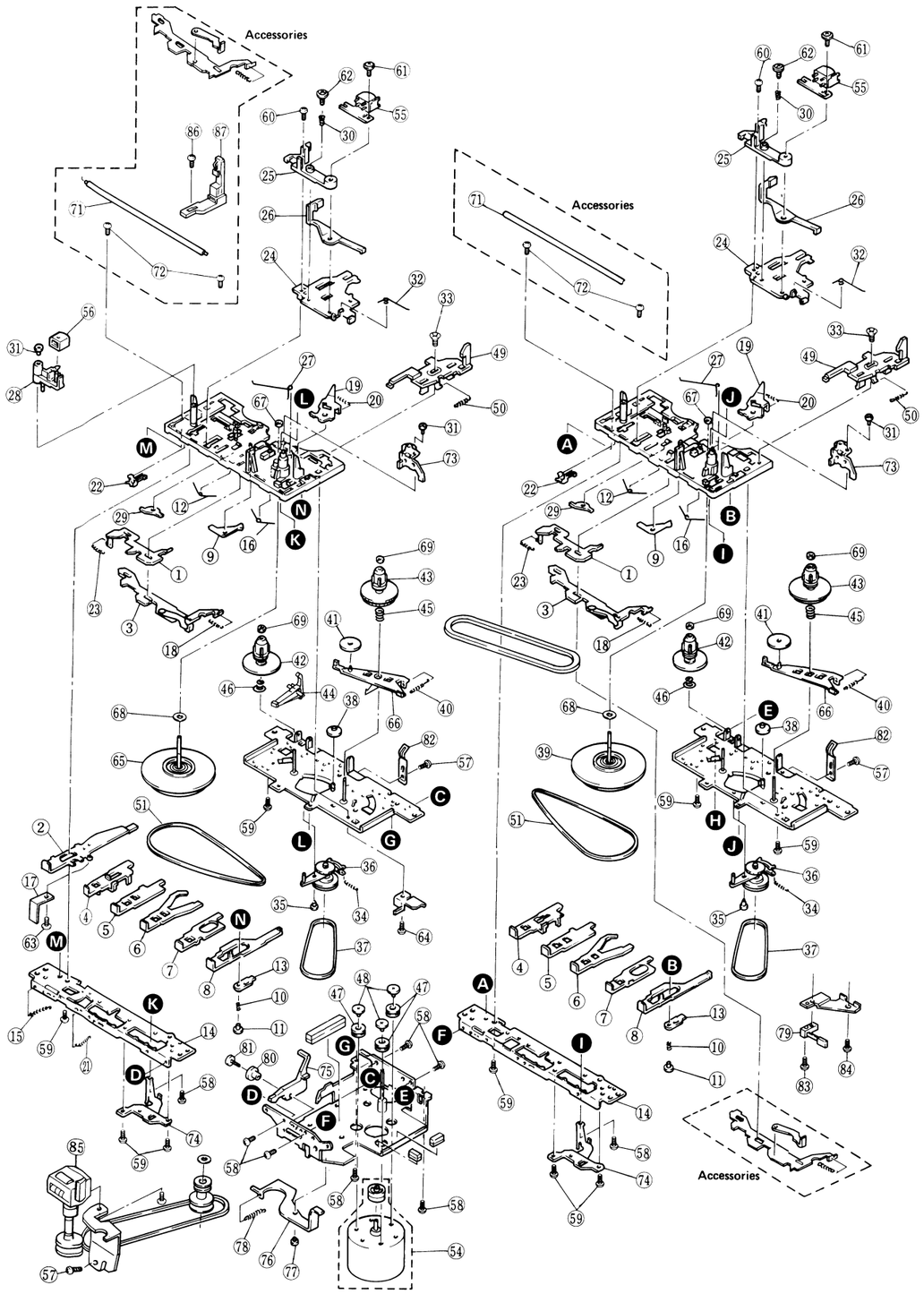
EXPLODED VIEW (Cabinet) *VUE EXPLOSEE (Coffret)*

- Nos. are reference Nos. of parts list.
- Ces numéros correspondent à la liste des pièces.



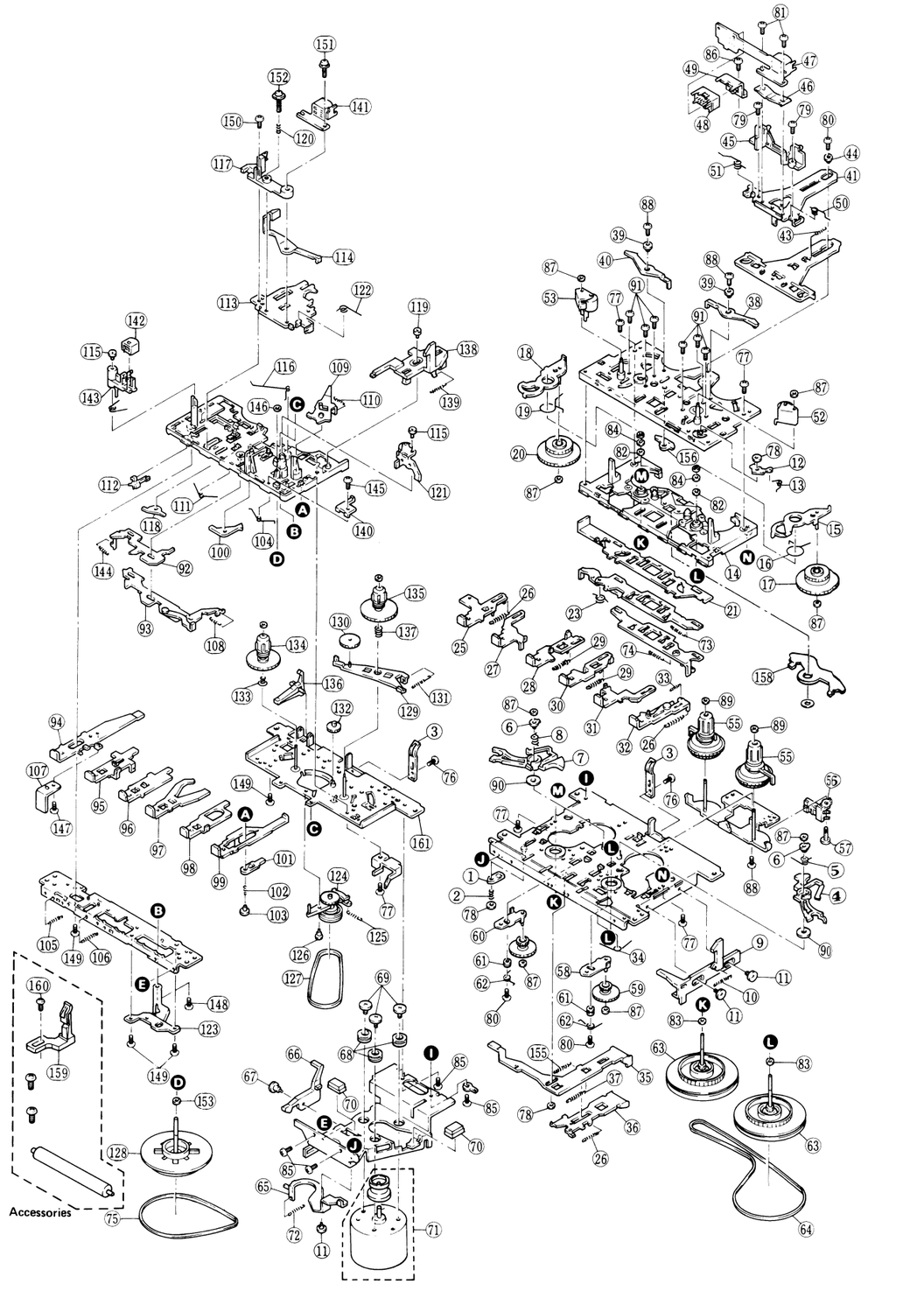
EXPLODED VIEW VUE EXPLOSEE [for E, E(BS)]
(Cassette Chasis) (Châssis de Cassette) [pour E, E(BS)]

- Nos. are reference Nos. of parts list.
- Ces numéros correspondent à la liste des pièces.



EXPLODED VIEW VUE EXPLOSEE [except E, E(BS)]
(Cassette Chasis) (Châssis de Cassette) [sauf E, E(BS)]

- Nos. are reference Nos. of parts list.
- Ces numéros correspondent à la liste des pièces.



REPLACEMENT PARTS LIST · TABLEAU DES PIÈCES

CC: Cylindrical ceramic MO: Metal oxide
CD: Ceramic discal MF: Mylar film
CF: Carbon film ST: Styrol
EL: Electrolytic PP: Polypro-pylene

SYMBOL No.	PART No.	DESCRIPTION
		CAPACITORS
C101	0208666	CD 18PF ±5% 50V
C102	0240051	CC 1500PF ±20% 16V
C103	0246448	CD 22PF ±5% 50V
C104	0248646	CD 6PF ±0.25PF 50V
C105	0248034	CD 15PF ±5% 50V
C106	0248038	CD 22PF ±5% 50V
C107	02441012	CD 1000PF ±10% 50V
C108	02441012	CD 1000PF ±10% 50V
C109	02441012	CD 1000PF ±10% 50V
C110	02441012	CD 1000PF ±10% 50V
C111	0248019	CD 9PF ±0.5PF 50V
C112	02441012	CD 1000PF ±10% 50V
C113	0209175	CD 0.047 μF +80% −20% 50V
C116	02441012	CD 1000PF ±10% 50V
C117	02441012	CD 1000PF ±10% 50V
C151	0208662	CD 12PF ±5% 50V [for E, E(BS)]
C152	0208646	CD 6PF ±0.5PF 50V [except E, E(BS)]
	0208650	CD 10PF ±0.5PF 50V [for E, E(BS)]
C153	0208650	CD 10PF ±0.5PF 50V [except E, E(BS)]
	0208682	CD 82PF ±5% 50V [for E, E(BS)]
C154	0246448	CD 22PF ±5% 50V [for E, E(BS)]
	0248494	CD 15PF ±5% 50V [except E, E(BS)]
C155	0208648	CD 8PF ±0.5PF 50V [except E, E(BS)]
	0208666	CD 18PF ±5% 50V [for E, E(BS)]
C156	0208662	CD 12PF ±5% 50V [except E, E(BS)]
C157	02750112	MF 0.01 μF ±10% 50V
C158	0268321	PP 360PF ±5% 100V [for E, E(BS)]
	0268442	PP 1500PF ±5% 100V [except E, E(BS)]
C159	0268321	PP 360PF ±5% 100V [except E, E(BS)]
	1221391	ST 180PF ±5% 50V [for E, E(BS)]
C160	0208686	CD 120PF ±5% 50V [for E, E(BS)]
C163	0244173	CD 0.022 μF +80% −20% 50V
C171	0208635	CD 5PF ±0.25PF 50V
C172	0244171	CD 0.01 μF +80% −20% 50V
C173	0244171	CD 0.01 μF +80% −20% 50V [for E, E(BS)]
C174	0244173	CD 0.022 μF +80% −20% 50V [for E, E(BS)]
C201	0244171	CD 0.01 μF +80% −20% 50V
C202	0244175	CD 0.047 μF +80% −20% 50V
C203	0244173	CD 0.022 μF +80% −20% 50V
C204	02523222	EL 22 μF 10V
C205	0240220	CD 0.047 μF ±10% 25V
C206	0240041	CC 470PF ±10% 50V
C207	0240220	CD 0.047 μF ±10% 25V

SYMBOL No.	PART No.	DESCRIPTION
C208	02528052	EL 0.47 μF 50V
C209	02523312	EL 100 μF 10V
C210	0209175	CD 0.047 μF +80% −20% 50V
C211	0244173	CD 0.022 μF +80% −20% 50V
C212	0244173	CD 0.022 μF +80% −20% 50V
C301	02528012	EL 0.1 μF 50V
C302	02528112	EL 1 μF 50V
C303	02528132	EL 3.3 μF 50V
C304	0268446	PP 1000PF ±5% 100V
C305	02528112	EL 1 μF 50V
C306	02523412	EL 1000 μF 10V
C307LR	02525212	EL 10 μF 16V
C308LR	0240216	CD 0.022 μF ±10% 25V
C351	02526152	EL 4.7 μF 25V
C352	02526152	EL 4.7 μF 25V
C353	02526152	EL 4.7 μF 25V
C354	02528112	EL 1 μF 50V
C401LR	0209724	CD 560PF ±10% 50V [except E, E(BS)]
	0209731	CD 1000PF ±10% 50V [for E, E(BS)]
C402LR	0209731	CD 1000PF ±10% 50V
C403LR	0248680	CD 68PF ±5% 50V
C404LR	0248680	CD 68PF ±5% 50V
C405LR	0240212	CD 0.01 μF ±10% 25V
C406LR	02525212	EL 10 μF 16V
C407	0244173	CD 0.022 μF +80% −20% 50V
C408	02523312	EL 100 μF 10V
C409	0244173	CD 0.022 μF +80% −20% 50V
C410	02522352	EL 470 μF 6.3V
C411LR	0240220	CD 0.047 μF ±10% 25V
C412LR	02523252	EL 47 μF 10V
C421LR	02528112	EL 1 μF 50V
C422	02523412	EL 1000 μF 10V
C423LR	02528112	EL 1 μF 50V
C424LR	0248688	CD 150PF ±5% 50V
C425LR	02528112	EL 1 μF 50V
C431LR	02528132	EL 3.3 μF 50V
C432LR	02528032	EL 0.33 μF 50V
C433LR	0240214	CD 0.015 μF ±10% 25V
C434LR	0240214	CD 0.015 μF ±10% 25V
C437LR	02528132	EL 3.3 μF 50V
C438LR	0209731	CD 1000PF ±10% 50V
C439	02523312	EL 100 μF 10V
C440	0209731	CD 1000PF ±10% 50V
C441	0240216	CD 0.022 μF ±10% 25V
C442	0208686	CD 120PF ±5% 50V
C443	0240220	CD 0.047 μF ±10% 25V
C444	0240216	CD 0.022 μF ±10% 25V
C445	02528132	EL 3.3 μF 50V
C446	02525212	EL 10 μF 16V
C447LR	0209733	CD 2200PF ±10% 50V
C461	02523312	EL 100 μF 10V
C462	02528132	EL 3.3 μF 50V
C463	02525212	EL 10 μF 16V
C464	0244175	CD 0.047 μF +80% −20% 50V
C482LR	02528052	EL 0.47 μF 50V
C483LR	0240224	CD 0.1 μF ±10% 25V
C484LR	0240216	CD 0.022 μF ±10% 25V
C485	02523312	EL 100 μF 10V
C486LR	02528052	EL 0.47 μF 50V
C487	0209734	CD 3300PF ±10% 50V

SYMBOL No.	PART No.	DESCRIPTION
C489	02528052	EL 0.47 μF 50V
C502LR	0240053	CC 2200PF ±20% 16V
C503LR	02525212	EL 10 μF 16V
C504LR	02523322	EL 220 μF 10V
C505LR	02760112	MF 0.1 μF 50V
C506LR	0252335	EL 470 μF 10V
C508LR	0240224	CD 0.1 μF ±10% 25V
C509	02525352	EL 470 μF 10V
C510LR	0244109	CD 4700PF ±10% 50V
C511LR	0209736	CD 6800PF ±10% 50V
C531LR	0209761	CD 0.01 μF ±20% 25V
C532LR	02523252	EL 47 μF 10V
C533LR	02525322	EL 220 μF 16V
C534LR	02760112	MF 0.1 μF ±10% 50V
C535	02525352	EL 470 μF 16V
C536LR	02523422	EL 2200 μF 10V
C538	0252241	EL 1000 μF 6.3V
C601	0209175	CD 0.047 μF +80% −20% 50V
C602	0209175	CD 0.047 μF +80% −20% 50V
C603	0209175	CD 0.047 μF +80% −20% 50V
C604	0209175	CD 0.047 μF +80% −20% 50V
C605	02525422	EL 2200 μF 16V
C606	02525422	EL 2200 μF 16V
C701	02525212	EL 10 μF 16V
C702	02525252	EL 47 μF 16V
C801LR	0240224	CD 0.1 μF ±10% 25V
C802LR	0240059	CC 6800PF ±30% 16V
C803LR	0240055	CC 3300PF ±20% 16V
C804LR	0240051	CC 1500PF ±20% 16V
C805LR	0240037	CC 220PF ±10% 50V
C806LR	0240057	CC 4700PF ±30% 16V
C807LR	0240061	CC 0.01 μF ±30% 16V
C808LR	0240216	CD 0.022 μF ±10% 25V
C809LR	0240216	CD 0.022 μF ±10% 25V
C810LR	0240061	CC 0.01 μF ±30% 16V
C811LR	0240059	CC 6800PF ±30% 16V
C831LR	02522512	EL 10 μF 16V
C832LR	02522512	EL 10 μF 16V
C833LR	02522772	EL 22 μF 16V
C834	02522642	EL 100 μF 10V
		RESISTORS
R101	0113579	CF 33Ω ±5% SRD1/6P
R104	0113663	CF 100KΩ ±5% SRD1/6P
R105	0113639	CF 10KΩ ±5% SRD1/6P
R106	0113611	CF 680Ω ±5% SRD1/6P
R107	0113575	CF 22Ω ±5% SRD1/6P
R154	0113645	CF 18KΩ ±5% SRD1/6P [for E, E(BS)]
	0113647	CF 22KΩ ±5% SRD1/6P [except E, E(BS)]
R155	0113645	CF 18KΩ ±5% SRD1/6P [for E, E(BS)]
	0113643	CF 15KΩ ±5% SRD1/6P [except E, E(BS)]
R156	0113643	CF 15KΩ ±5% SRD1/6P [except E, E(BS)]
R171	0113591	CF 100Ω ±5% SRD1/6P [for E, E(BS)]
R172	0113675	CF 330KΩ ±5% SRD1/6P [for E, E(BS)]

SYMBOL No.	PART No.	DESCRIPTION
R173	0113605	CF 390Ω ±5% SRD1/6P [for E, E(BS)]
R201	0113591	CF 100Ω ±5% SRD1/6P
R202	0113643	CF 15KΩ ±5% SRD1/6P
R203	0113663	CF 100KΩ ±5% SRD1/6P
R204	0113583	CF 47Ω ±5% SRD1/6P
R205	0113639	CF 10KΩ ±5% SRD1/6P
R206	0113639	CF 10KΩ ±5% SRD1/6P
R207	0113639	CF 10KΩ ±5% SRD1/6P
R209	0113599	CF 220Ω ±5% SRD1/6P
R301	0113615	CF 1KΩ ±5% SRD1/6P
R302	0113615	CF 1KΩ ±5% SRD1/6P
R303	0113639	CF 10KΩ ±5% SRD1/6P
R304	0113671	CF 220KΩ ±5% SRD1/6P
R306	0113639	CF 10KΩ ±5% SRD1/6P
R308LR	0113627	CF 3.3KΩ ±5% SRD1/6P
R309LR	0113645	CF 18KΩ ±5% SRD1/6P
R310	0113615	CF 1KΩ ±5% SRD1/6P
R311	0113615	CF 1KΩ ±5% SRD1/6P [except E, E(BS)]
R351	0113639	CF 10KΩ ±5% SRD1/6P
R352	0113639	CF 10KΩ ±5% SRD1/6P
R353	0113639	CF 10KΩ ±5% SRD1/6P
R354	0113639	CF 10KΩ ±5% SRD1/6P
R355	0113663	CF 100KΩ ±5% SRD1/6P
R356	0113647	CF 22KΩ ±5% SRD1/6P
R401LR	0113663	CF 100KΩ ±5% SRD1/6P
R402LR	0113675	CF 330KΩ ±5% SRD1/6P
R403LR	0113643	CF 15KΩ ±5% SRD1/6P
R404LR	0113647	CF 22KΩ ±5% SRD1/6P
R405LR	0113591	CF 100Ω ±5% SRD1/6P
R406	0113599	CF 220Ω ±5% SRD1/6P
R407LR	0113615	CF 1KΩ ±5% SRD1/6P
R408LR	0113615	CF 1KΩ ±5% SRD1/6P
R409LR	0113663	CF 100KΩ ±5% SRD1/6P
R411LR	0113647	CF 22KΩ ±5% SRD1/6P
R412LR	0113631	CF 4.7KΩ ±5% SRD1/6P
R421LR	0113663	CF 100KΩ ±5% SRD1/6P
R423LR	0113661	CF 82KΩ ±5% SRD1/6P
R424LR	0113663	CF 100KΩ ±5% SRD1/6P
R425LR	0113615	CF 1KΩ ±5% SRD1/6P
R426LR	0113655	CF 47KΩ ±5% SRD1/6P
R427LR	0113615	CF 1KΩ ±5% SRD1/6P
R428LR	0113641	CF 12KΩ ±5% SRD1/6P
R431LR	0113627	CF 3.3KΩ ±5% SRD1/6P
R432LR	0113637	CF 8.2KΩ ±5% SRD1/6P
R433LR	0113685 2	CF 820KΩ ±5% SRD1/6P
R434LR	0113615	CF 1KΩ ±5% SRD1/6P
R436LR	0113589	CF 82Ω ±5% SRD1/6P
R437LR	0113639	CF 10KΩ ±5% SRD1/6P
R438LR	0113619	CF 1.5KΩ ±5% SRD1/6P
R439	0113637	CF 8.2KΩ ±5% SRD1/6P
R440LR	0113639	CF 10KΩ ±5% SRD1/6P
R441	0113599	CF 220Ω ±5% SRD1/6P
R442	0129567	CF 180Ω ±5% SRD1/4P
R443	0129571	CF 270Ω ±5% SRD1/4P
R444	0113563	CF 6.8Ω ±5% SRD1/6P
R445	0113647	CF 22KΩ ±5% SRD1/6P
R446	0113603	CF 330Ω ±5% SRD1/6P
R447	0113623	CF 2.2KΩ ±5% SRD1/6P
R448	0113631	CF 4.7KΩ ±5% SRD1/6P

SYMBOL No.	PART No.	DESCRIPTION
R449	0113615	CF 1KΩ ±5% SRD1/6P
R450	0113615	CF 1KΩ ±5% SRD1/6P
R461	0113603	CF 330Ω ±5% SRD1/6P
R462	0113609	CF 560Ω ±5% SRD1/6P
R463	0113639	CF 10KΩ ±5% SRD1/6P
R464	0113639	CF 10KΩ ±5% SRD1/6P
R465	0113639	CF 10KΩ ±5% SRD1/6P
R466	0113639	CF 10KΩ ±5% SRD1/6P
R467	0113639	CF 10KΩ ±5% SRD1/6P
R469	0113639	CF 10KΩ ±5% SRD1/6P
R470	0113639	CF 10KΩ ±5% SRD1/6P
R471	0113655	CF 47KΩ ±5% SRD1/6P
R472	1119509	MO 47Ω ±10% RS2B
R474	0113639	CF 10KΩ ±5% SRD1/6P
R475	0113647	CF 22KΩ ±5% SRD1/6P
R481LR	0113633	CF 5.6KΩ ±5% SRD1/6P
R482LR	0113637	CF 8.2KΩ ±5% SRD1/6P
R483LR	0113639	CF 10KΩ ±5% SRD1/6P
R484LR	0113651	CF 33KΩ ±5% SRD1/6P
R485	0113639	CF 10KΩ ±5% SRD1/6P
R486LR	0113629	CF 3.9KΩ ±5% SRD1/6P
R487	0113599	CF 220Ω ±5% SRD1/6P
R488LR	0113679	CF 470KΩ ±5% SRD1/6P
R489LR	0113643	CF 15KΩ ±5% SRD1/6P
R490LR	0113635	CF 6.8KΩ ±5% SRD1/6P
R491LR	0113651	CF 33KΩ ±5% SRD1/6P
R501LR	0113643	CF 15KΩ ±5% SRD1/6P
R503LR	0113641	CF 12KΩ ±5% SRD1/6P
R504LR	0113595	CF 150Ω ±5% SRD1/6P
R505LR	0129509	CF 2.2Ω ±5% SRD1/4P
R506LR	1119510	MO 56Ω ±10% RS2B
R507LR	0113647	CF 22KΩ ±5% SRD1/6P
R508LR	0113643	CF 15KΩ ±5% SRD1/6P
R509LR	0113639	CF 10KΩ ±5% SRD1/6P
R531LR	0113651	CF 33KΩ ±5% SRD1/6P
R532LR	0113587	CF 68Ω ±5% SRD1/6P
R533LR	0113639	CF 10KΩ ±5% SRD1/6P
R534LR	0129509	CF 2.2Ω ±5% SRD1/4P
R536LR	0113595	CF 150Ω ±5% SRD1/6P
R537	0113297	CF 680Ω ±5% SRD1/2P
R538	0113609	CF 560Ω ±5% SRD1/6P
R540	0113635	CF 6.8kΩ ±5% SRD1/6P
R551	0113605	CF 390Ω ±5% SRD1/6P
R671	0113655	CF 47KΩ ±5% SRD1/6P
R672	0113639	CF 10KΩ ±5% SRD1/6P
R673	0113665	CF 120KΩ ±5% SRD1/6P
R674	0113639	CF 10KΩ ±5% SRD1/6P
R675	0113637	CF 8.2KΩ ±5% SRD1/6P
R676	0113633	CF 5.6KΩ ±5% SRD1/6P
R677	0113641	CF 12KΩ ±5% SRD1/6P
R701	0113639	CF 10KΩ ±5% SRD1/6P
R702	0113605	CF 390Ω ±5% SRD1/6P
R741	0129579	CF 560Ω ±5% SRD1/4P
R742	0129577	CF 470Ω ±5% SRD1/4P
R743	0129579	CF 560Ω ±5% SRD1/4P
R810	0129561	CF 100Ω ±5% SRD1/4P
R811LR	0113641	CF 12KΩ ±5% SRD1/6P
R812LR	0113639	CF 10KΩ ±5% SRD1/6P
R813LR	0113633	CF 5.6KΩ ±5% SRD1/6P
R814LR	0113633	CF 5.6KΩ ±5% SRD1/6P
R815LR	0113633	CF 5.6KΩ ±5% SRD1/6P

SYMBOL No.	PART No.	DESCRIPTION
R816LR	0113677	CF 390KΩ ±5% SRD1/6P
R817LR	0113649	CF 27KΩ ±5% SRD1/6P
R818LR	0113615	CF 1KΩ ±5% SRD1/6P
R819LR	0113615	CF 1KΩ ±5% SRD1/6P
R821LR	0113641	CF 12KΩ ±5% SRD1/6P
R822LR	0113639	CF 10KΩ ±5% SRD1/6P
R823LR	0113635	CF 6.8KΩ ±5% SRD1/6P
R824LR	0113633	CF 5.6KΩ ±5% SRD1/6P
R825LR	0113637	CF 8.2KΩ ±5% SRD1/6P
R831LR	0113675	CF 330KΩ ±5% SRD1/6P
R832LR	0113619	CF 1.5KΩ ±5% SRD1/6P
R833LR	0113599	CF 220Ω ±5% SRD1/6P

ICs & TRANSISTORS

IC101	2398201	TA7358P
IC201	2389511	TA7640AP
IC301	23010412	TA7343AP
IC401	23011912	TA7784P
IC402	23008312	μPC4558C
IC501	2389521	μPC1278H
IC531	2389521	μPC1278H
IC701	23696122	BA6137
Q171	2319083	HIT9011GH [for E, E(BS)]
Q201	2329453	2SC945PA
Q202	2329582	2SA933R(R)
Q301	2329582	2SA933R(R)
Q431LR	2328652	2SC1740LNT(S)
Q432LR	2329453	2SC945PA
Q441	2329453	2SC945PA
Q461	2317803	2SD1266(P)
Q481LR	2328652	2SC1740LNT(S)
Q482LR	2329316	2SC1741QR
Q531LR	2329316	2SC1741QR
Q532	2329582	2SA933R(R)
Q661	2328652	2SC1740LNT(S)
Q662	2328652	2SC1740LNT(S)
Q663	2328652	2SC1740LNT(S)
Q664	2329582	2SA933R(R)
Q801LR	2328652	2SC1740LNT(S)

DIODES

D101	2397421	1SS133T
D102	2397421	1SS133T
D103	23380312	1S2790
D201	2397421	1SS133T
D351	2397421	1SS133T
D352	2397421	1SS133T
D353	2397421	1SS133T
D354	2397421	1SS133T
D355	2397421	1SS133T
D356	2397421	1SS133T
D357	2397421	1SS133T
D358	2397421	1SS133T
D359	2397421	1SS133T
D360	2397421	1SS133T
D361	2397421	1SS133T
D362	2397421	1SS133T
D363	2397421	1SS133T
D364	2397421	1SS133T
D462	2397421	1SS133T

SYMBOL No.	PART No.	DESCRIPTION
D463	2397421	1SS133T
D464	2397421	1SS133T
D501	2397421	1SS133T
D531	2397421	1SS133T
D601	2398062	1N4001
D602	2398062	1N4001
D603	2398062	1N4001
D604	2398062	1N4001
D605	2398062	1N4001 [for W, W(UN)]
ZD461	23375272	HZ9C1
ZD741	23375872	HZ5C1
D381	2397611	LN242RPH-LF
D701	23390312	SLR-34UR5
D702	23390312	SLR-34UR5
D703	23390312	SLR-34UR5
D704	23390312	SLR-34UR5
D705	23390312	SLR-34UR5
D731	23390312	SLR-34UR5
D732	23390312	SLR-34UR5
D733	23390312	SLR-34UR5
D734	23390312	SLR-34UR5
D735	23390312	SLR-34UR5
D741	23390312	SLR-34UR5
D742	23390342	SLR-34MG5F
D743	23390342	SLR-34MG5F
VARIABLE RESISTORS		
R300	0189331	5kΩ-(B) (FM MPX ADJ.)
R661	0158924	5kΩ-(B) (TAPE SPEED ADJ.)
R801	0189284	100kΩ-(B) (G.E. CONTROL)
R802	0189284	100kΩ-(B) (G.E. CONTROL)
R803	0189284	100kΩ-(B) (G.E. CONTROL)
R804	0189284	100kΩ-(B) (G.E. CONTROL)
R805	0189284	100kΩ-(B) (G.E. CONTROL)
R851	0189131	10kΩ-(A) (VOLUME CONTROL)
COILS & TRANSFORMERS		
L001	2227352	Peaking coil
L101	2137683	FM RF coil
L102	2135274	FM RF coil
L151	2137662	SW ANT coil [for E, E(BS)]
	2137821	SW ANT coil [except E, E(BS)]
L152	2757994	Ferrite antenna [for E, E(BS)]
	2757982	Ferrite antenna [except E, E(BS)]
L154	2137671	SW OSC coil [for E, E(BS)]
	2137672	SW OSC coil [except E, E(BS)]
L155	2137631	MW OSC coil [for E, E(BS)]
	2137633	SW OSC coil [except E, E(BS)]
L156	2137642	LW OSC coil [for E, E(BS)]
	2137631	MW OSC coil [except E, E(BS)]

SYMBOL No.	PART No.	DESCRIPTION
L171	2137684	Choke coil
L431LR	2227991	Choke coil
L661	2227352	Choke coil
T101	2154962	FM IF transformer
T201	2154952	AM IF transformer
T202	2154964	FM IF transformer
T203	2154951	AM IF transformer
T441	2137651	REC OSC transformer
⚠T601	2267481	Power transformer [for E]
⚠	2267482	Power transformer [for E(BS), AU]
⚠	2267483	Power transformer [for H, HC]
⚠	2267484	Power transformer [for W, W(UN)]
MISCELLANEOUS		
CP101	2137191	FM band pass filter
CT151	0283130	Capacitor semi variable [for E, E(BS)]
	0283557	Trimmer [except E, E(BS)]
CT154	0283557	Trimmer [for E, E(BS)]
	0283130	Capacitor semi variable [except E, E(BS)]
CT156	0282148	Capacitor semi variable [for E, E(BS)]
CV101	0282441	Capacitor variable
⚠F601	2727727	Fuse T250mA 250V [for W, W(UN)]
⚠	2728034	Fuse 400mA 250V [for H, HC]
⚠	2727728	Fuse T160mA 250V [for E, E(BS), AU]
⚠F602	2727964	Fuse 2.5A 125V [for H, HC]
⚠	2728076	Fuse T2A [except H, HC]
⚠F604	2728034	Fuse 400mA 250V [for H, HC]
⚠	2727721	Fuse T400mA 250V [except H, HC]
P602	2689463	2P terminal
MF201	2135321	Ceramic filter
S101	2628531	Lever switch (BAND SELECT)
S301	2629369	Lever switch (FM MODE/DUBBING SPEED SELECT)
S401	2628531	Lever switch (FUNCTION SELECT)
S402	2628523	Slide switch (REC/PLAY SELECT)
S403	2629369	Lever switch (TAPE SELECT)
S441	2629261	Slide switch (RIF)
S551	2600240	Push switch (SURROUND/3D)
⚠S601	2628671	Slide switch (AC/DC SELECT)
⚠S602	2628294	Rotary switch (VOLTAGE SELECT) [for W, W(UN)]
⚠S651	2639869	AC switch (OPERATE)
	4567410	3φ x 4 DT screw (IC501, 531)
	3809041	LED holder

SYMBOL No.	PART No.	DESCRIPTION
	3950522	LED holder
J401	2678201	2P Pin jack
J571	2678781	Stereo jack
J601	2678881	DC jack [for W, W(UN)]

SYMBOL No.	PART No.	DESCRIPTION
		CABINET
1	3808871	Button (P)
2	3808881	Button (SD)
3	3808882	Button (SD)
4	3808891	SW knob
5	3808901	VOL. knob
6	3808911	REV piece
7	4577816	BT screw (3 ϕ x 20)
8	3691425	3 ϕ x 25 BT screw
9	4005891	Front case assy
11	4578972	3 ϕ x 10 BT screw
12	8699410	3 ϕ x 10 BT screw
13	2404121	Speaker 16
14	2404111	Speaker 12
15	4005911	Top panel assy [for E, E(BS)]
	4005912	Top panel assy [for W, W(UN), AU]
	4005913	Top panel assy [for H, HC]
16	4005881	Cassette lid assy
17	4005882	Cassette lid assy [for E, E(BS)]
	4005883	Cassette lid assy [except E, E(BS)]
18	3934271	8 roller
19	4577661	Roller pin
20	4005901	TUN holder assy
21	3808971	Tuning shaft
22	3295294	Tuning knob
23	3340312	Ring spring
24	3977801	Pointer
25	3348702	Pulley
26	3340321	Spring M
27	3907261	Damper
28	3368932	EJ spring
29	2757901	ROD. antenna
30	4469401	R antenna bracket
31	4567433	3 ϕ x 10 DT bind screw
32	4005921	Rear case assy [for E]
	4005922	Rear case assy [for E(BS)]
	4005923	Rear case assy [for W]
	4005924	Rear case assy [for W(UN)]
	4005925	Rear case assy [for AU]
	4005926	Rear case assy [for H]
	4005927	Rear case assy [for HC]
33	3369849	Spring A
34	4436666	Terminal
35	3369781	Battery spring
36	3973524	Battery lid assy
37	4476681	REC lever
38	4476691	REC lever
39	3808981	Handle
40	3809011	SW arm

SYMBOL No.	PART No.	DESCRIPTION
41	4578976	3 ϕ x 20 BT screw
42	4577832	3 ϕ x 10 BT screw
43	2737381	Microphone
44	2589243	TN-21W mecha [for E, E(BS)]
	2589252	TN-521Z mecha [except E, E(BS)]
47	48195382	Button lever shaft
48	48190722	2 ϕ x 7 screw
49	48196182	2 ϕ x 9 screw [for E, E(BS)]
52	3809021	Cassette button
53	3809031	Cassette button (PL)
⚠54	2702945	Power supply cord [for HC]
⚠	2706241	Power supply cord [for H]
⚠	2706251	Power supply cord [for AU]
⚠	2706264	Power supply cord [for W, W(UN)]
⚠	2707709	Power supply cord [for E]
⚠	2717902	Power supply cord [for E(BS)]
55	3808991	Handle arm
56	3809001	Handle piece
		for ACCESSORIES
⚠	26679222	Siemense plug [for W, W(UN)]

SYMBOL No.	PART No.	DESCRIPTION
		CASSETTE CHASSIS [for E, E(BS)]
1	48189922	Switch plate
2	4823651	REC button lever
3	4839371	PAUSE button actuator assy
4	4823661	PLAY brtton lever
5	4823671	RWD button lever
6	4823681	FF button lever
7	4823691	STOP button lever
8	4823701	PAUSE button lever
9	48189902	RWD lever
10	48191322	PAUSE lever spring
11	48191332	PAUSE stopper
12	48202142	Button lever spring
13	4833451	PAUSE lever
14	48202152	Sub chassis
15	48190072	Button lever spring
16	48191002	Button lever spring
17	4833452	Record plate
18	48190082	Actuator spring
19	48190092	Auto lever
20	48190002	Auto lever spring
21	48202172	PLAY button lever spring
22	48261012	Leaf switch
23	48202182	Switch actuator spring
24	48202192	Head panel
25	48190142	Head base
26	4832412	Sensing plate assy
27	48202212	Head panel arm spring
28	48190182	MG arm
29	48190062	PR stopper
30	48190172	Spring
31	48325222	Screw
32	48202232	Pressure roller arm spring
33	48190452	Screw
34	48202252	RF pulley arm spring
35	48202262	RF arm collar screw
36	4850591	RF pulley arm assy
37	48202272	Belt
38	4839379	FF gear
39	4850592	Flywheel assy
40	48190202	TG plate spring
41	4839378	Take up roller gear
42	4842431	Supply reel assy
43	4839381	Take up reel assy
44	4832421	Record safety lever
45	4839382	Back tension spring
46	4839379	Back tension spring
47	4819039	Motor rubber
48	48195332	Motor collar screw
49	48190432	Eject slide lever
50	48190442	Eject slide lever spring
51	4833457	Belt
54	4850598	Motor assy
55	2555671	Record playback head
56	4848051	Erase head
57	48190632	Tapping screw (2 ϕ x 3)
58	48190682	Tapping screw (2 ϕ x 4)
59	48196072	Bind tapping screw (2 ϕ x 5)
60	48196112	Screw (2 ϕ x 6)

SYMBOL No.	PART No.	DESCRIPTION
61	48190602	Screw (2 ϕ x 7)
62	48196002	Azimuth screw
63	48191862	Screw (2 ϕ x 3)
64	48191912	Tapping screw (2 ϕ x 6)
65	4839375	Flywheel assy
66	4850093	T gear plate assy
67	48190782	Washer (1.55 ϕ x 3.8 x 0.5)
68	4832432	Washer (2.05 ϕ x 4 x 0.5)
69	4848953	Washer (1.2 ϕ x 3.7 x 0.4)
71	48192322	Button lever shaft
72	48190722	Screw (2 ϕ x 7)
73	4839372	Pinch roller arm assy
74	4831610	Metal guide
75	4833463	Lever
76	4833464	Lever
77	4833465	Special screw
78	4833467	Spring
79	4850596	Leaf switch
80	4833460	Collar (B)
81	4833472	Tapping screw (2 ϕ x 6)
82	4819036	Pack spring
83	4850594	Camera screw (1.7 ϕ x 3)
84	48191952	Tapping screw (2 ϕ x 5)
85	2789577	Counter
86	4853736	C tight screw (2 ϕ x 5)
87	4856341	Leaf switch
		CASSETTE CHASSIS [except E, E(BS)]
1	48191312	PAUSE lever
2	48191322	PAUSE lever spring
3	4842395	Pack spring plate
4	4853652	Auto lever (F)
5	4853653	Auto lever spring (F)
6	4853654	Spring stopper
7	4853655	Auto lever (R)
8	4853656	Auto lever spring (R)
9	4853657	Eject slide lever
10	4853658	Eject slide lever spring
11	4833465	Special screw
12	4853650	Turn over arm
13	4853661	Turn over spring
14	4853662	Button base ass'y
15	4853663	T gear arm (F) assy
16	4853664	T gear arm (F) spring
17	4853665	T cam gear (F)
18	4853666	T gear arm (R) assy
19	4853667	T gear arm (R) spring
20	4853668	T cam gear (R)
21	4853669	Slide plate
23	4853671	Lock release spring
25	4853673	Mode button lever (S)
26	4853674	Button lever spring
27	4853675	PLAY button lever
28	4853676	FF button lever R (S)
29	4853677	FF button lever spring
30	4853678	FF button lever F (S)
31	4853679	STOP button lever (S)
32	4853670	Program button lever (S)
33	4853681	Pull arm spring
34	4853682	STOP button lever spring

SYMBOL No.	PART No.	DESCRIPTION
35	4853683	Relay plate
36	4853684	FF SW Plate
37	4853685	R.C. spring
38	4853686	Auto control arm (F)
39	4853687	Control collar
40	4853688	Auto control arm (R)
41	4853689	Head panel
43	4853691	R.C. plate spring
44	4853692	H.P. collar
45	4853693	Tape guide
46	4853694	Head spring plate
47	2557632	P. head
48	4842401	Slide switch
49	4853696	Switch bracket
50	4853697	Pinch roller spring (F)
51	4853698	Pinch roller spring (R)
52	4853699	Pinch roller (F) assy
53	4853690	Pinch roller (R) assy
55	4853702	Reel assy
56	4853703	Leaf switch
57	48191952	Tapping screw (2 ϕ x 5)
58	4853704	FF gear arm (F) assy
59	4853705	FF gear
60	4853706	FF gear arm (R) assy
61	4853707	FF gear arm collar
62	4853708	FF gear arm spring (F)
63	4853709	Flywheel assy
64	4853700	Main belt
65	4853712	P. kick lever
66	4833463	Lever
67	4833466	Special screw
68	4842404	Motor rubber
69	48195332	Motor collar screw
70	4853713	Anti vibration felt
71	4856672	Motor pulley assy
72	4853715	P. kick lever spring
73	4853716	Lock actuator spring
74	4853717	SW actuator spring
75	4853718	Main belt
76	4853719	C tapping screw (2 ϕ x 3)
77	48191912	Tapping screw (2 ϕ x 6)
78	4842443	Washer (2.1 ϕ x 5 x 0.5)
79	4853710	Screw (2 ϕ x 6)
80	4853721	Tapping screw (1.7 ϕ x 4)
81	4853722	Screw (2 ϕ x 4.5)
82	4842414	Washer (2 ϕ x 3.5 x 0.3)
83	4842430	Washer (2.1 ϕ x 3 x 0.3)
84	4853723	Washer (1.45 ϕ x 4 x 0.5)
85	48190682	Tapping screw (2 ϕ x 4)
86	4842412	Tapping screw (1.7 ϕ x 2.5)
87	4842444	Washer (1.2 ϕ x 3 x 0.25)
88	4853724	Tapping screw (1.7 ϕ x 3)
89	48190772	Washer (1.2 ϕ x 3 x 0.4)
90	4853725	Washer (3 ϕ x 8.5 x 0.13)
91	4853726	Tapping screw (1.7 ϕ x 8)
92	4853727	Switch actuator
93	4839371	Push button actuator assy
94	4823651	REC button lever
95	4823661	PLAY button lever
96	4823671	RWD button lever
97	4823681	FF button lever
98	4823691	STOP button lever

SYMBOL No.	PART No.	DESCRIPTION
99	4823701	PAUSE button lever
100	48189902	RWD lever
101	4833451	PAUSE lever
102	48191322	PAUSE lever spring
103	48191332	PAUSE stopper
104	48191002	Button lever spring
105	48190072	Button lever spring
106	48202172	PLAY button lever spring
107	4842422	Record spring board
108	48190082	Actuator spring
109	48190092	Auto lever
110	48190002	Auto lever spring
111	48202142	Button lever spring
112	48191082	Leaf switch
113	48202192	Head panel
114	4842423	Sensing plate assy
115	4832522	Screw
116	48202212	Head panel spring
117	48190142	Head base
118	48190062	PR stopper
119	48190452	Screw
120	48190172	Spring
121	4839372	Pinch roller arm assy
122	4842424	Pinch roller spring
123	4831610	Metal guide
124	4853728	RF pulley arm assy
125	48202252	RF pulley arm spring
126	48202262	RF arm collar screw
127	48202272	Belt
128	4850092	Flywheel
129	4842429	T gear plate assy
130	4839378	Take up roller gear
131	48190202	TG plate spring
132	4839379	FF gear
133	4842420	Back tension spring
134	4842431	Supply reel assy
135	4853729	Take up reel assy
136	4832421	Record safety lever
137	4839382	Back tension spring
138	48190432	Eject slide lever
139	48190442	Eject slide lever spring
140	4842433	Bracket
141	2555671	Record playback head
142	4848051	Erase head
143	48190182	MG arm
144	48202182	Switch actuator spring
145	4842434	Camera tapping screw (2 ϕ x 3.5)
146	48190782	Washer
147	48191862	Screw (2 ϕ x 3)
148	48190682	Tapping screw (2 ϕ x 4)
149	48196072	Bind tapping screw (2 ϕ x 5)
150	48196112	Screw (2 ϕ x 6)
151	48190602	Screw (2 ϕ x 7)
152	48196002	Azimuth screw
153	4832431	Washer (2.05 ϕ 4 x 0.5)
155	4853732	Button lever spring (P)
156	4853733	RC arm
158	4853734	Control arm
159	4856341	Leaf switch
160	4853736	C tight screw (2 ϕ x 5)
161	4842428	Reel base assy

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